SITE PLAN

BURKITT COMMONS COMMERCIAL

Nolensville Road Nolensville, Davidson & Williamson County, TN

DAVIDSON CO. MAP 186 PARCELS 14.01, 21.00 & 26.00

WILLAMSON CO. MAP 33 PARCELS 82.01 & 82.02

Metro Water & Sewer Notes

All water and sewer construction shall be in accordance with specifications and standard details of the Metro Water Services.

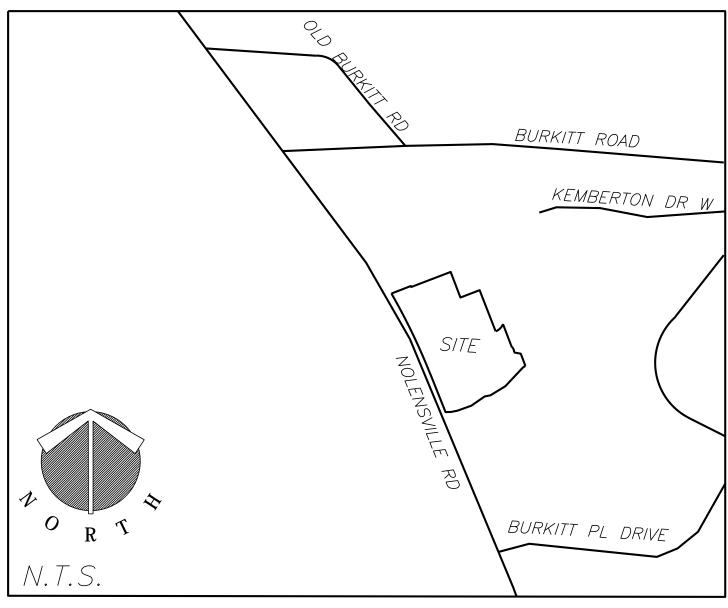
- 1. The contractor is responsible for reimbursing the Metro Water Services the cost of inspection.
- 2. The contractor is to provide and maintain the construction identification sign for private development approved.
- 3. After completion of the sanitary sewer, the developer is responsible for the televising of the lines prior to final acceptance. The videotaping must be coordinated with the Metro Water Services Inspection Section. All costs will be borne by the developer.
- 4. All connections to existing manholes shall be by coring and resilient connector method.
- 5. Reduced Pressure Backflow Prevention Devices (RPBP) or dual check valve will be required on all test and fill lines (jumper) needed for water main construction and must be approved by the Metro Water Services.
- 6. All water meters shall be a minimum of 24" not to exceed a maximum of 28" below finished grade.
- 7. Upon completion of construction of water and/or sewer, the engineer shall provide the department with a complete set of as-built plans on moist erasable Mylar in reverse and in digital (*.dwg) format. Sewer plans shall be sealed by a licensed professional engineer or a registered land surveyor and shall include actual field angles between lines, all actual service lines and tee locations, the distance of the end of the service line to property corners and lines and/or station and offset from sewer centerline to end of service line, the depth to the top of the end of the service line, and shall reflect all alignment and grade changes. Water line plans shall be sealed by a licensed professional engineer or a registered land surveyor and shall include offset distance from the roadway centerline, or property line right of way, line depth, locations of hydrants, valves, reducers, tees and pressure reducing devices where applicable. All drawings must be completed and submitted prior to acceptance of the sewers or water mains into the public system and any connections being made.
- 8. Pressure regulating devices will be required on the customer side of the meter when pressures exceed
- 9. Pressure regulating devices will be required on the street side of the meter when pressures exceed 150
- 10. All water mains must be located within the paved area including all blow-off assemblies.
- 11. The contractor shall provide the record drawing information noted above to the engineer.

Metro Public Works Construction Notes

All water and sewer construction shall be in accordance with specifications and standard details of the Metro Water Services.

- 1. Proof rolling of all public street sub-grades is required in the presence of the Public Works' inspector. This request is to be made 24 hours in
- 2. Stop signs to be 30 inch x 30 inch.
- 3. Street signs to have six inch white letters on a nine inch green aluminum blade.
- 4. All signs to have 3m reflective coating.
- 5. All utility boxes located in the right of way or in the sidewalk shall be approved by the mpw inspector
- 6. All of the public sidewalk along the roadway shall follow the grade of the roadway and shall not be adjusted to meet private sidewalk connections. The adjustments shall be made out of the right of way.
- 7. Drainage shall not flow over the sidewalk.
- 8. Curb ramps shall have detectable warning strips
- 9. Driveway width can be sight adjusted at the discretion of the MPW inspector.
- Elevation of the curb and gutter is the responsibility of the contractor but once in place shall function as
- 11. Curb and gutter installed may be tested to verify flow to the storm drain system. Drainage shall not pool in roadways.
- 12. Replace stormwater grates within public right of way with bike friendly grates.

VICINITY MAP



SHEET INDEX

COVER

EXISTING CONDITIONS PLAN

SITE LAYOUT PLAN

C2.00 UTILITY PLAN

SANITARY PLAN AND PROFILE

C3.00 MASS GRADING PLAN

GRADING AND DRAINAGE PLAN

EROSION CONTROL PLAN - STAGE 1

EROSION CONTROL PLAN - STAGE 2

EROSION CONTROL PLAN - STAGE 3

CIVIL NOTES

CIVIL DETAILS

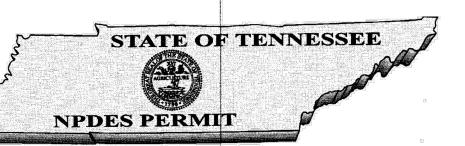
C4.02 CIVIL DETAILS

CIVIL DETAILS

LANDSCAPE PLAN

LANDSCAPE PLAN

LANDSCAPE PLAN



Tracking Number TNR240843

NOTICE OF COVERAGE UNDER THE TENNESSEE MULTI-SECTOR GENERAL PERMIT

William R. Snodgrass Tennessee Tower 312 Rosa L. Parks Avenue, 11th Floor

Under authority of the Tennessee Water Quality Control Act of 1977 (T.C.A. 69-3-101 et seq.) and the delegation of authority from the United States Environmental Protection Agency under the Federal Water Pollution Control Act, as amended by the Clean Water Act of 1977 (33 U.S.C. 1251, et seq.):

Name of the Construction Project: Burkitt Commons (21.3 acres) TNR240843 Master Tracking Number at the Site: Regent Homes Permittee Name: Contractor(s):

npdes-stormwater-construction-permit.

from site located at:

no contractor storm water associated with construction activity is authorized to discharge: Nolensville Pk and Burkitt Rd, Davidson County

Mill Creek to receiving waters named: in accordance with effluent limitations, monitoring requirements and other conditions set forth herein.

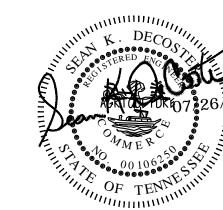
Likely presence of threatened or endangered species in one mile radius: YES Likely presence of threatened or endangered species downstream: YES

Additional pollution prevention requirements apply for discharges into waters which TDEC identifies as: - Unavailable Condition - Siltation

Your coverage under Sector AE of the Tennessee Multi-Sector Permit (TMSP) shall become effective on June 24, 2016, and shall be terminated upon receipt of Notice of Termination. Compliance with the terms and conditions of the 2011 Tennessee Construction General Permit (CGP) shall be required, and will be deemed as compliance with the TMSP. The 2011 CGP and related materials are available on the division's construction stormwater webpage at http://www.tn.gov/environment/article/permit-water-



630 SOUTHGATE AVENUE, SUITE A - NASHVILLE, TN 37203 615.248.9999 www.civil-site.com



OWNER/DEVELOPER

NEWCO-BURKITT, LLC 9010 OVERLOOK BLVD, SUITE C-2 BRENTWOOD, TN 37027 **CONTACT**: ANNE NICHOLAS WEISS annenicholas@pgmproperties.com

ARCHITECT

(615) 370-8381

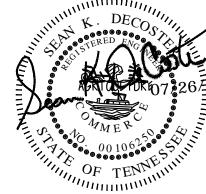
MAX DESIGN GROUP 2862 BUFORD HIGHWAY, SUITE 106 DELUTH, GA 30096 **CONTACT**: RICHARD M. MAXIAN, AIA maxdesigngroup@charter.net (770) 530-5245

LANDSCAPE ARCHITECT

HEIBERT + BALL, LAND DESIGN LLC 1894 GEN. GEO. PATTON DR, SUITE 400 FRANKLIN, TN 37067 **CONTACT**: CONNOR BALL, PLA connor@hblanddesign.com (615) 376-2421

ENGINEER

CIVIL SITE DESIGN GROUP 630 SOUTHGATE AVENUE, SUITE A NASHVILLE, TN 37203 **CONTACT**: SEAN K. DECOSTER seand@civil-site.com **P** (615) 248-9999 **F** (615) 251-9575



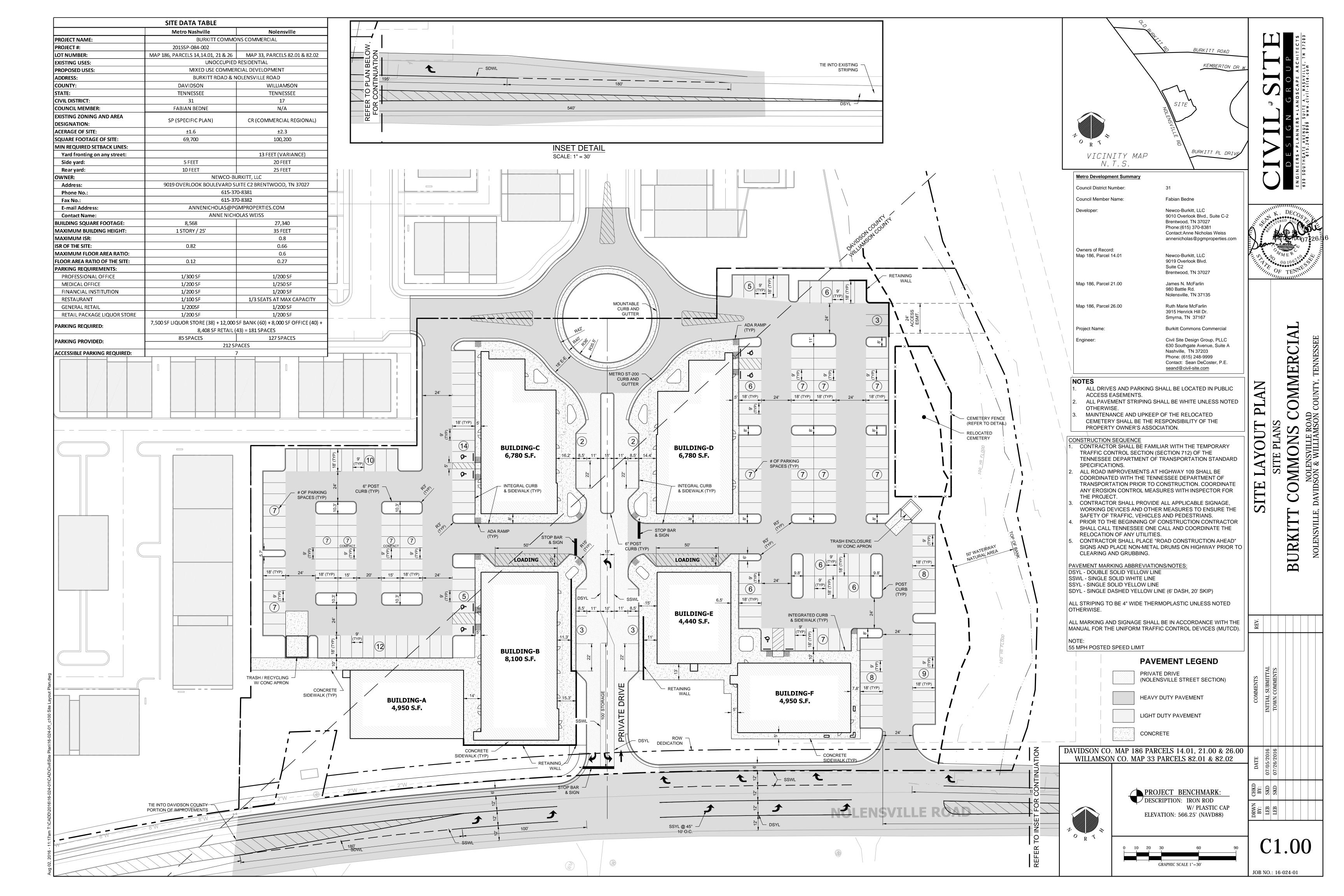
NOTE

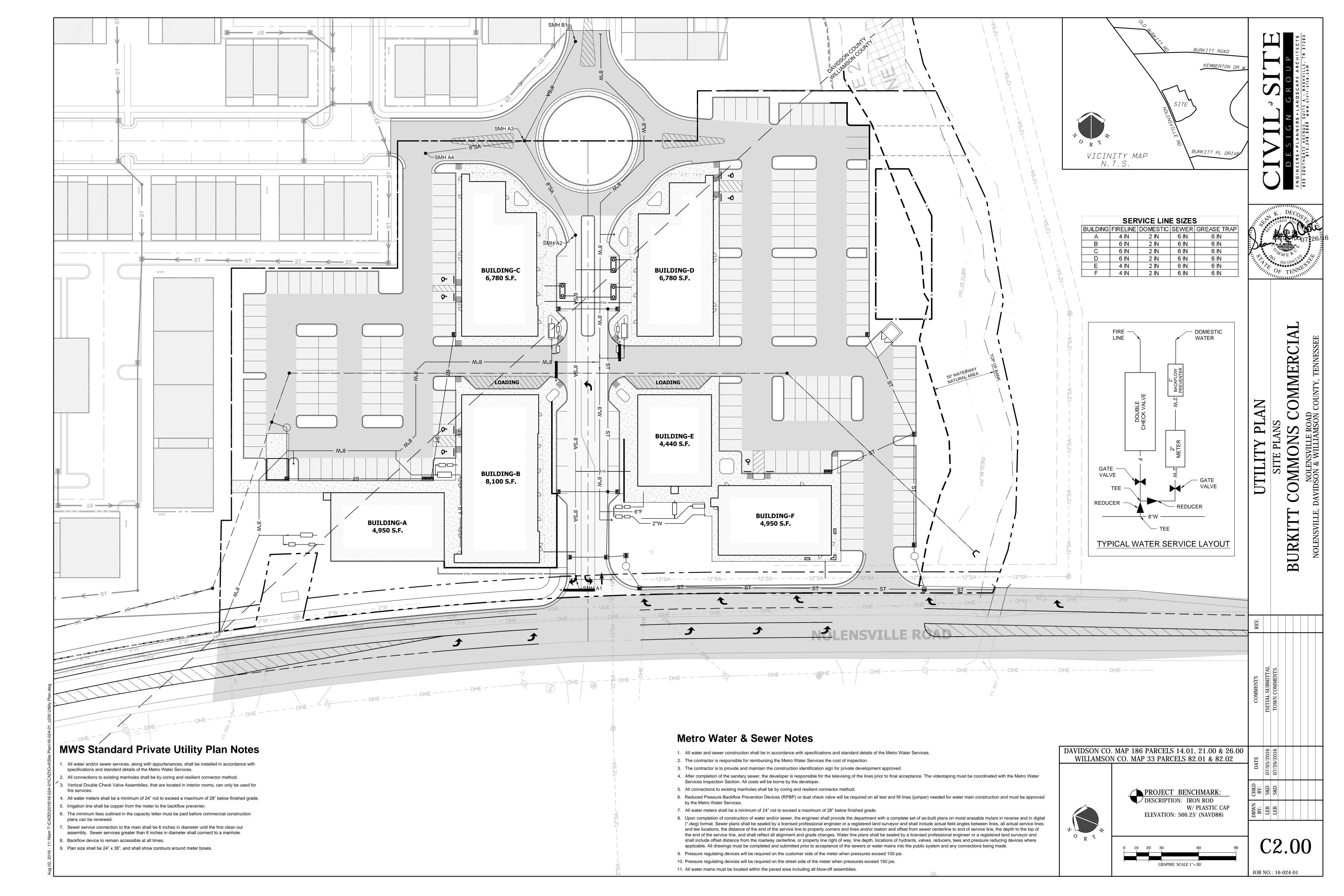
THE PROPOSED PROJECT IS LOCATED IN BOTH THE TOWN OF NOLENSVILLE AND METRO NASHVILLE. DESIGN STANDARDS AND REGULATIONS SHALL BE BASED ON THE MUNICIPALITY THAT THE PROPOSED IMPROVEMENT IS LOCATED IN

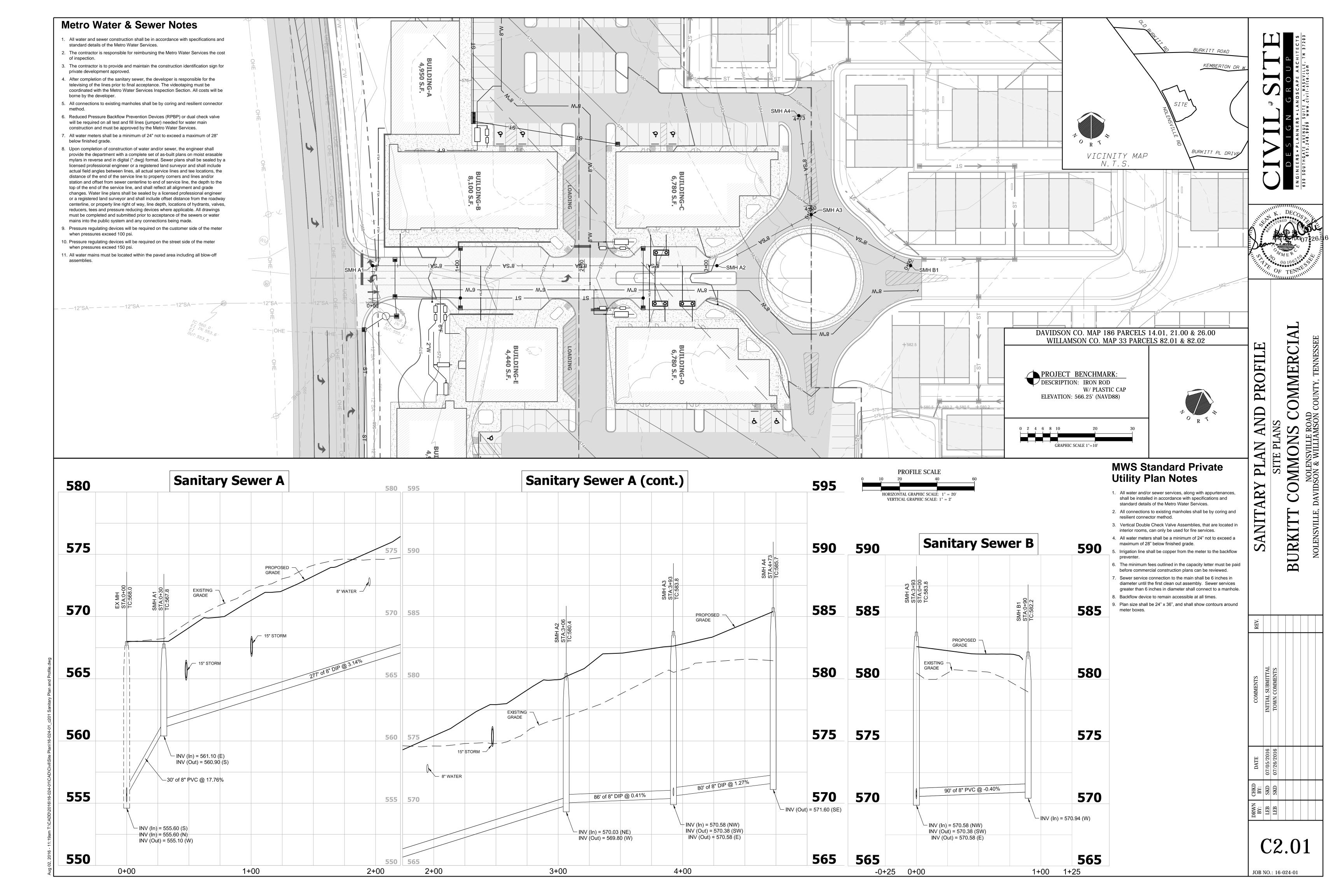
DRWN BY:	CHKD BY:	DATE	COMMENTS	REV.
LEB	SKD	07/05/2016	INITIAL SUBMITTAL	
LEB	SKD	07/26/2016	TOWN COMMENTS	

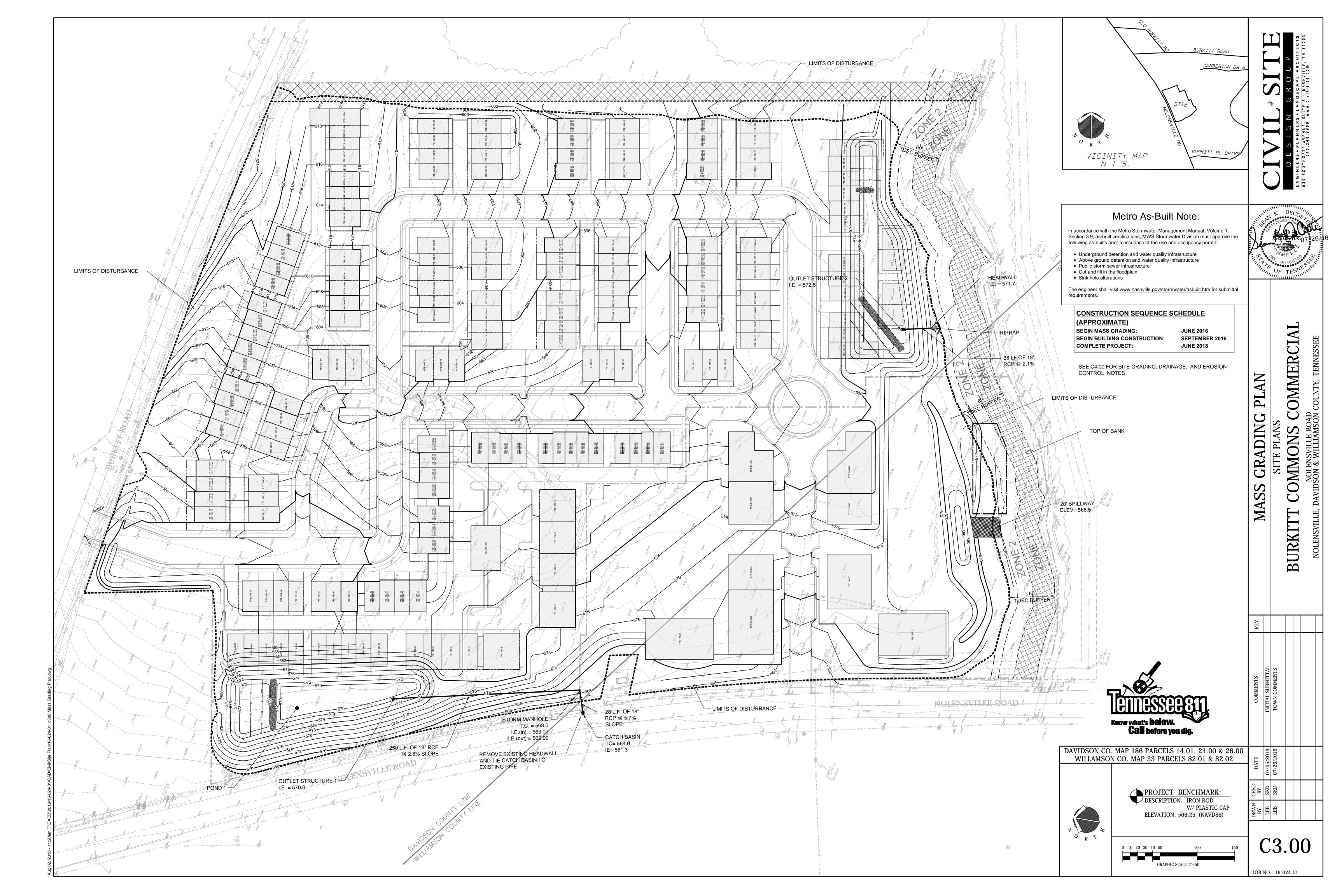


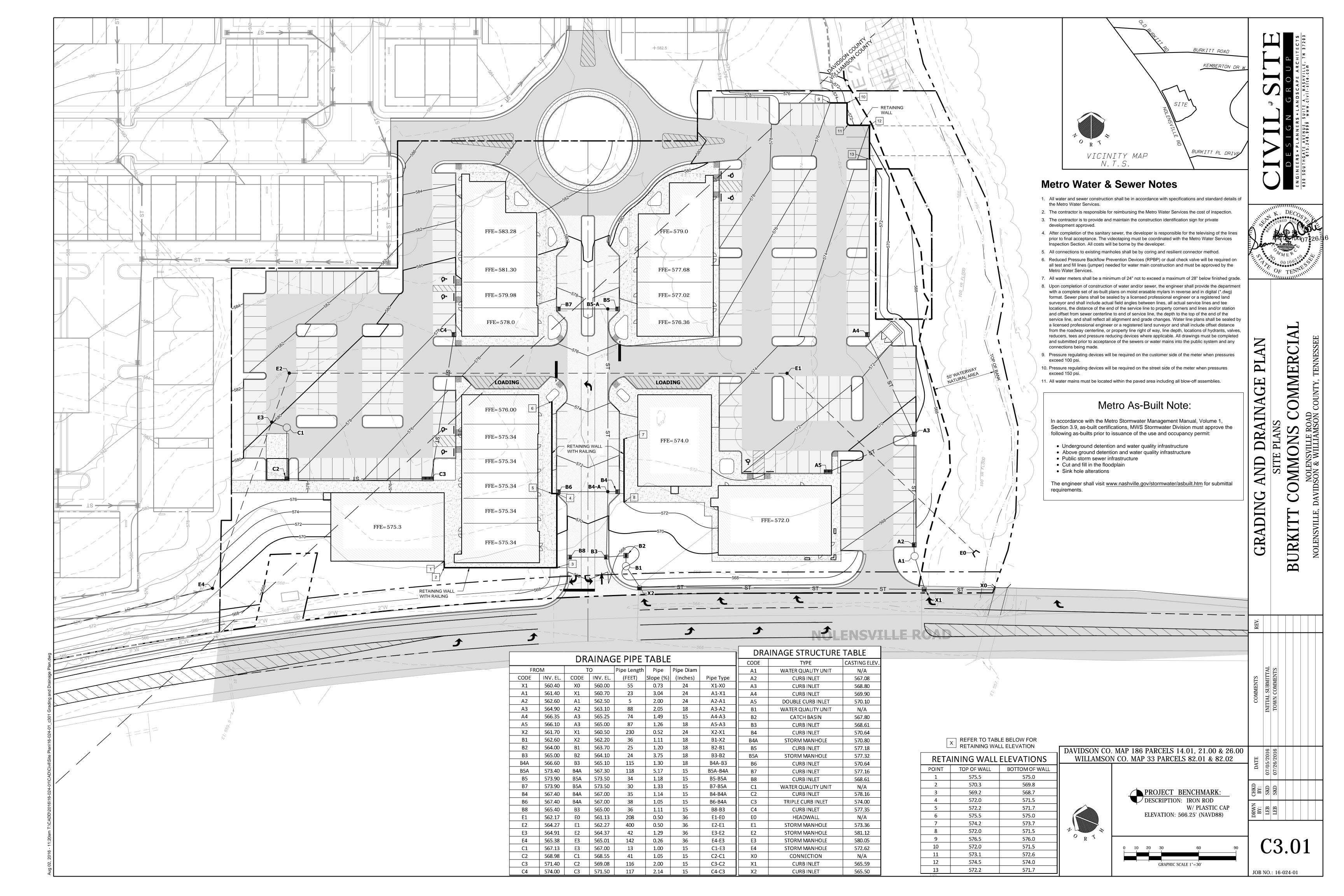


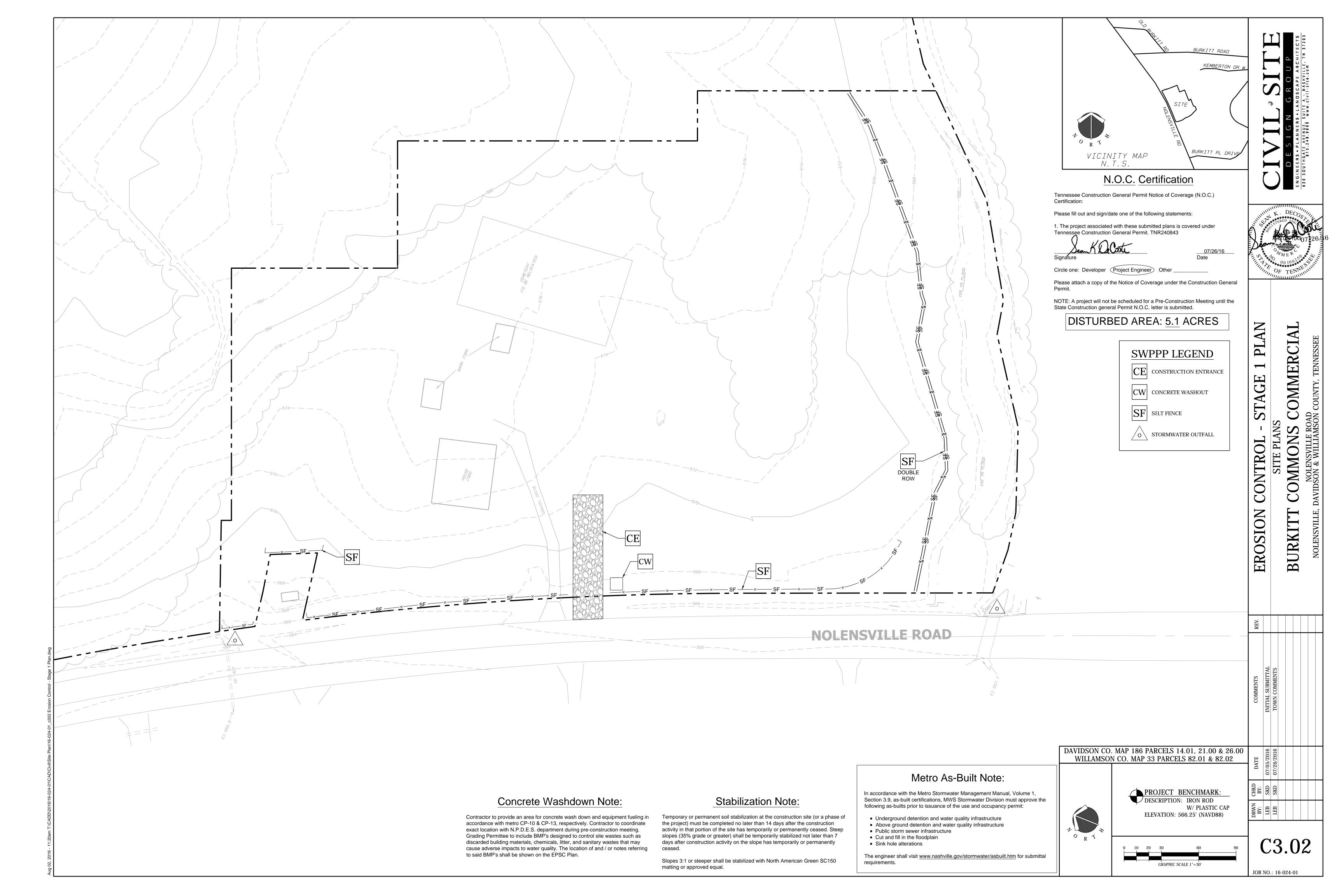


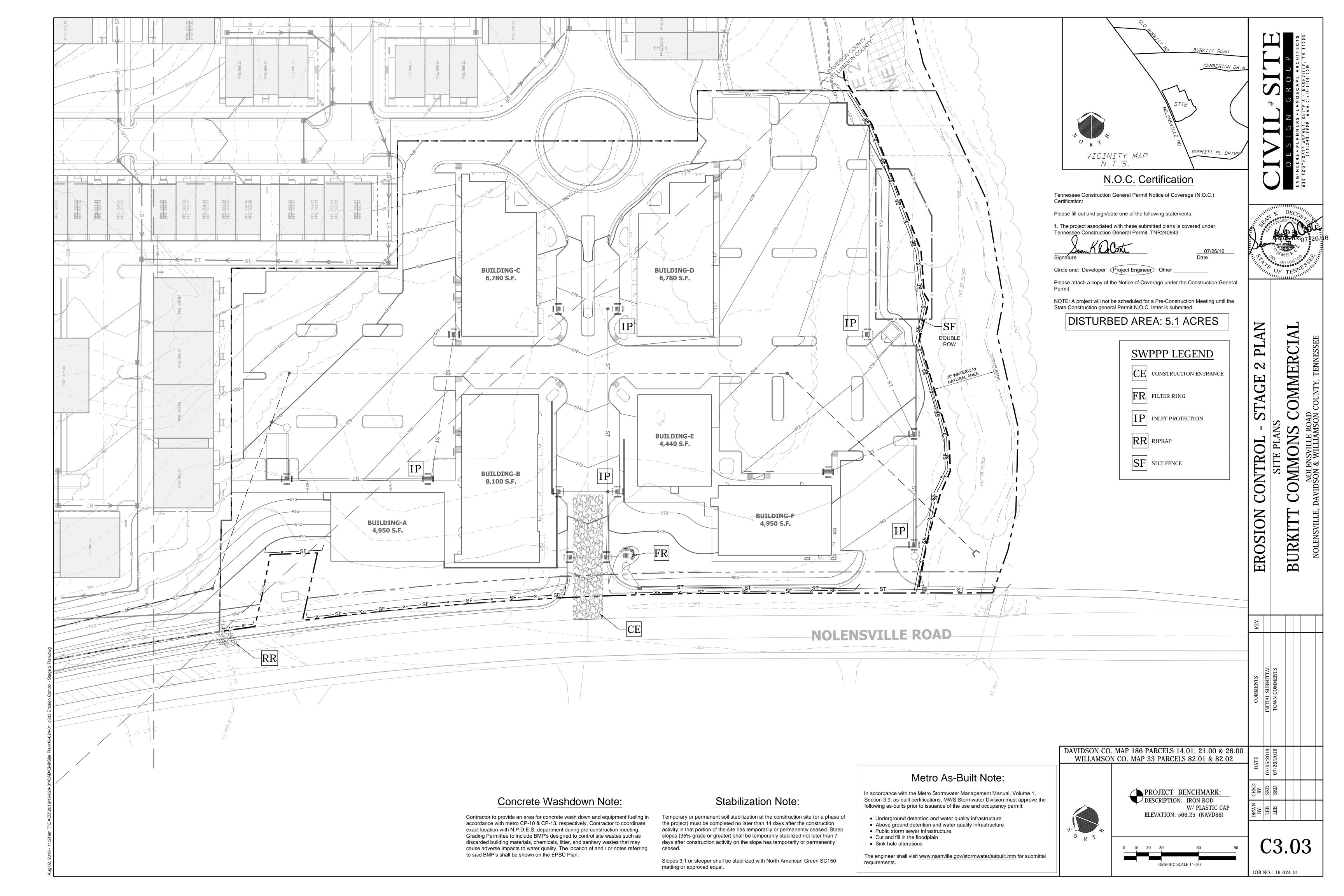


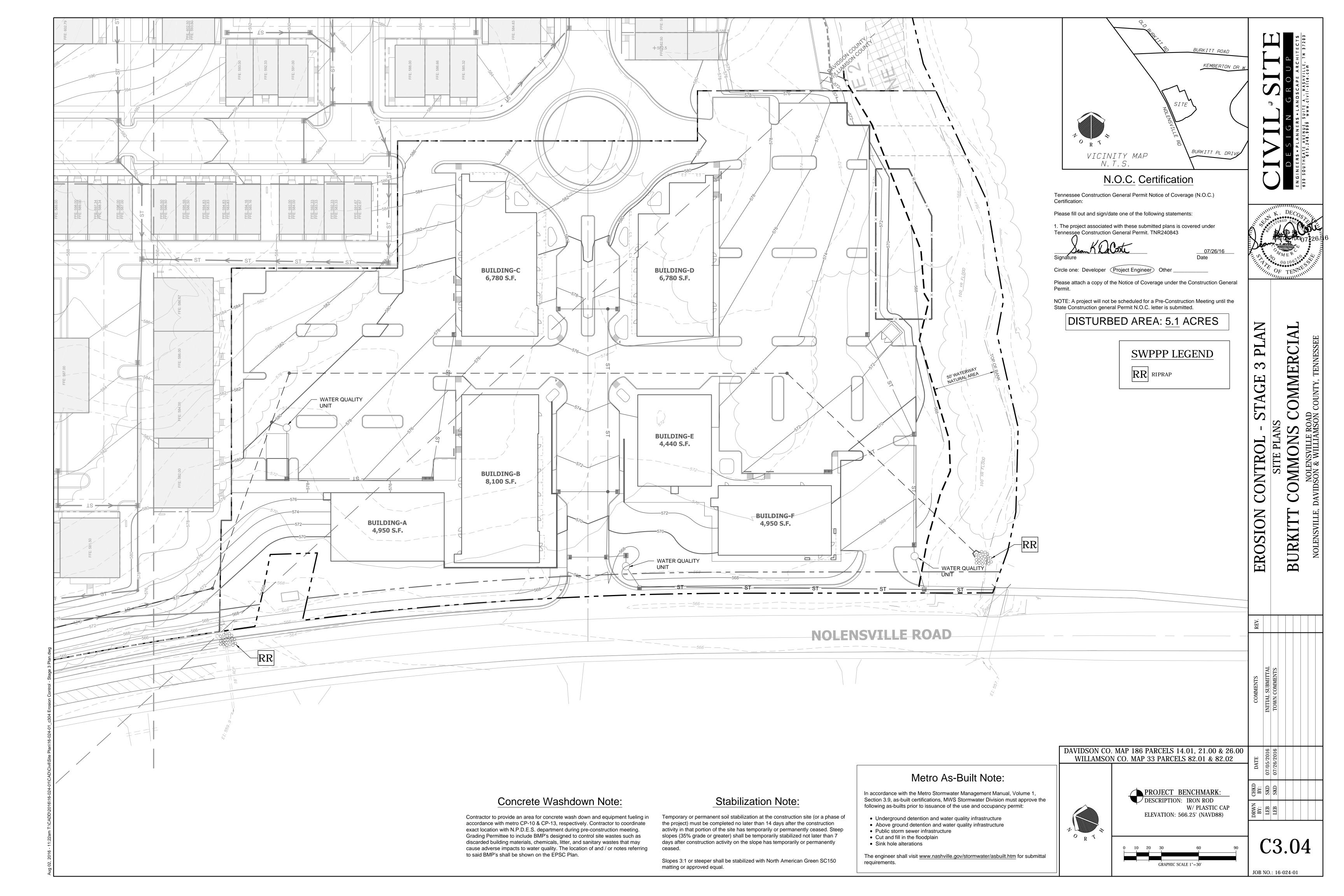












General Notes

- 1. Base information was taken from a survey prepared by Crawford & Cummings, P.C., dated March 31, 2016.
- 2. Provide a smooth transition between existing pavement and new pavement. Slight field adjustment of final grades may be necessary.
- 3. All roadway, driveway, sidewalk, and curb construction shall conform to the requirements and specifications of the local municipality codes and
- 4. Concrete for curbs and sidewalks shall be 3500 PSI concrete unless required otherwise by local codes.
- 5. The site layout is based on control points as noted.
- 6. The contractor shall conform to all local codes and receive approval
- where necessary before commencement of any construction 7. All site related construction materials and installation shall conform to
- local governing agency regulations and specifications. 8. Handicap ramps shall have a maximum slope of 1:12.
- 9. All pavement materials and construction shall conform to the local governing agency and state D.O.T. standards and specifications.
- 10. The contractor shall check all existing conditions, (i.e. inverts, utility routings, utility crossings, and dimensions) in the field prior to commencement of any utility work. Report any discrepancies to the owner's representative. The contractor shall repair any damage caused during construction to existing features (i.e. pavement, sidewalks, curbs,
- 11. Dimensions are to face of curb and/or exterior face of building unless

utilities, etc.), at his own expense, to the standards of the

preconstruction condition or better.

commencement of any construction.

- 12. Curbs shall be parallel to the centerline of drives. The curb shall be placed only after having all break points (PC & PT of curves) located at the face of curb or at a consistent offset by a land surveyor.
- 13. Any work unacceptable to the owner's representative or to the local governing authority shall be repaired or replaced by the contractor at no additional expense to the owner.
- 14. Existing pavement of private or public roadways/drives shall be patched in accordance with the local governing authority's standards wherever utility installation requires removal of the existing pavement. Coordinate pavement trenching locations with site civil, plumbing and electrical
- 15. The contractor shall comply with all pertinent provisions of the "manual of accident prevention in construction" issued by AGC of America, Inc. and the "Safety and Health Regulations for Construction" issued by the
- U.S. Department of Public Works. 16. Contractor shall give all necessary notices and obtain all permits prior to
- 17. In the event of any discrepancies and/or errors found in these site drawings, or if problems are encountered during construction, the contractor shall be required to notify the engineer before proceeding
- 18. The general contractor is particularly cautioned that the location and/or elevation of the existing utilities shown hereon is based on utility company records, and where possible, field measurements. The contractor shall not rely on this information as being exact or complete The contractor shall call the appropriate utility company at least 72 hours prior to any excavation and request field verification of utility locations. It shall be the contractor's responsibility to relocated existing utilities conflicting with improvements shown hereon in accordance with all local, state, and federal regulations governing such operations.
- 19. Contractor shall exercise extreme caution in the use of equipment in and around overhead and underground electrical wires and services. If at any time in the pursuit of this work the contractor must work in the close proximity of the above-noted wires, the electric company shall be contacted prior to such work and the proper safety measures taken. A thorough examination of the overhead and underground wires in the project area should be made by the contractor prior to the initiation of construction.
- 20. The owner and engineer do not assume responsibility for the possibility that, during construction, utilities other than those shown may be encountered or that actual locations of those shown may be different from locations designated on the contract drawings. In areas where it is necessary that exact locations be known of underground utilities, the contractor shall, at his own expense, furnish all labor and tools necessary to either verify and substantiate or definitely establish the position of underground utility lines.
- 21. Do not scale this drawing as it is a reproduction and subject to
- 22. These plans, prepared by Civil Site Design Group, do not extend to or include systems pertaining to the safety of the construction contractor or its employees, agents or representatives in the performance of the work. The seal of the engineering services registered professional engineer hereon does not extend to any such safety systems that may now or hereafter be incorporated into these plans. The construction contractor shall prepare or obtain the appropriate safety systems which may be required by U.S. Occupational Safety and Health Administration (OSHA) and/or local regulations.
- 23. In the case of conflict between this drawing and any other drawing and/or the specifications, the engineer shall be immediately notified for clarification.
- 24. The final sitet plan/building permit shall depict a minimum of 5 foot clear path of travel for pedestrian ways, including public sidewalks, and the location of all existing and proposed obstructions. Prior to the issuance of use and occupancy permits, existing obstructions within the path of travel shall be relocated to provide a minimum of 5 feet of clear access.

Site Demolition Notes

- 1. Base Information was taken from a survey prepared by Crawford & Cummings PC dated March 31, 2016. Civil Site Design Group, P.L.L.C. and any of their consultants shall not be held responsible for the accuracy and/or completeness of that information shown hereon or any errors or omissions resulting from such.
- 2. The contractor shall call Tennessee One Call (811) 72 hours prior to proceeding with any excavation.
- 3. The contractor shall field verify the limits of demolition with the owner's representative prior to commencement of work.
- 4. The contractor shall conform to local codes, obtain all permits and give all notices required for execution of the work.
- 5. Cavities left by structure removal shall be suitably backfilled and compacted in accordance with these plans and specifications.
- 6. The contractor is responsible for all demolition and removal necessary to accomplish the proposed improvements shown on these plans.

- 7. The contractor is responsible for locating all charted and uncharted utilities. Take care to protect utilities that are to remain. Repair any damage according to local standards and at the contractor's expense. Coordinate all construction with the appropriate utility company.
- 8. In areas where existing pavement, walks, or curbs are to be removed, saw cut to provide a clean edge. Coordinate extent of pavement demolition with the limit of new improvements on the site layout plan.
- All materials being removed and not relocated under the new construction, including trees and shrubs, signs, utility structures, etc., shall be first offered to the owner's representative and if not accepted shall then be properly disposed of by the contractor.
- 10. The contractor shall use water sprinkling and other suitable methods as necessary to control dust and dirt caused by the demolition work.
- 11. The contractor shall preserve and protect survey control points and shall be responsible for replacement of any disturbed control points.
- 12. No utility or storm sewer lines shall be demolished until the new lines have been installed and are placed into operation.
- 13. Contractor shall coordinate phasing of the demolition with the owner's representative and local governing agency prior to beginning work Disruption of existing utility services and traffic patterns shall be minimized to the extent possible and initiated only after approval by the

local governing agency and the utility companies.

- 14. Where water line and sewer line abandonment is planned, the contractor may abandon water lines and sewer lines in place where they occur at least 24" (to top of the pipe) below final subgrade elevations. All utility lines being abandoned in place shall have all ends permanently closed using a concreted plug. Existing lines within the proposed building footprint (and 10 feet beyond the building footprint) shall be removed.
- 15. Existing lights and poles being removed shall be first offered to the owner's representative prior to disposing of them. Coordinate Lighting demolition and layout with the electrical drawings.
- 16. Existing trees to be preserved are to be barricaded before beginning construction. In accordance with the tree preservation notes and detail on the landscape plan.
- 17. The contractor shall incorporate into his work any isolation valves or temporary plugs required to construct new utility lines and demolish existing utility lines.
- 18. If existing irrigation lines lie within the area affected by the proposed construction. The contractor shall rework the existing irrigation systems in accordance with directives noted on the landscape plan. Service shall be maintained during construction to the landscaped areas currently
- 19. Relocation of existing plant materials shall be coordinated with the owner and relocated to a designated area on the site.
- 20. Selective clearing consisting of removal of vines, saplings under 1" diameter and underbrush shall be performed in tree preservation areas internal to the project and noted on plans.

Site Utility Notes

- The sanitary sewer line shall be PVC-SDR 35. If domestic water line is equal to or less than 3" it shall be Type K copper. If domestic water line is greater than 3" it shall be ductile iron pipe. The public water line and the fire service line shall be class 52 ductile iron pipe.
- 2. Water meters shall be no deeper than 24" from the top of meter to proposed finished grade unless otherwise required by the local water
- 3. Prior to submitting his bid, the contractor will be solely responsible for contacting owners of all affected utilities in order to determine the extent to which utility relocations and/or adjustments will have upon the schedule of work for the project. While some work may be required around utility facilities that will remain in place, other utility facilities may need to be adjusted concurrently with the contractor's operations.
- The contractor shall comply with all pertinent provisions of the manual of Accident Prevention and Construction issued by AGC of America.
- Provide a minimum 36" of cover over all water lines unless required otherwise by the local water department.
- All water lines, sewer lines, and appurtenances shall be of materials and construction that conform to the local water department/district's requirements and specifications.
- 7. Coordinate the exact location of all utilities entering the building with the
- 8. Safeguard existing utilities from damage during construction of this project. In the event that special equipment is required to work over and around the utilities, the contractor will be required to furnish such equipment at no additional cost to the owner.
- Reduced Pressure Backflow Preventer (RPBP) or dual check valves will be required on all test and fill lines (jumper) needed for water main construction and must be approved by the local water department/district.
- 10. All connections to existing manholes shall be by the coring and resilient
- 11. Before connections are made into existing utilities, the new lines are to be flushed and tested by the contractor in accordance with the local water department/district specifications.
- 12. The contractor shall adjust the alignment of the water lines (horizontally and/or vertically) to allow the required bracing at bends and tees.
- 13. The contractor shall provide all horizontal and vertical bends to attain the alignment indicated on the plans. Provide vertical bends where necessary to allow water lines to pass under or over other utility lines. (All bends and braces needed may not be actually shown). Provide bracing and/or rodding at all bends and tees as required by local utility department/district.
- 14. Contractor shall mark the location of all new PVC lines with #8 wire.
- 15. The location of existing utilities shown on these plans are approximate only. The contractor shall notify each individual utility owner of his plan of operation in the area of the utilities. Prior to commencing work, the contractor shall contact the utility owners and request them to properly locate their respective utility on the ground in the area of private utility lines. The contractor shall have an underground locator mark the location of the existing lines. This notification shall be given at least three (3) business days prior to commencement of operations around the utility.
- Fire hydrant assemblies include the appropriate sized tee (with kicker), 6" line to hydrant, 6" gate valve (with valve box), and fire hydrant (with kicker). Hydrants shall be installed at locations within 7 feet of the curb, (minimum of 2 feet behind curb).
- 17. Where drainage or utility lines occur in proposed fill areas, the fill material shall be placed and compacted in accordance with the specifications and the Geotechnical Engineer recommendations prior to

- installation of drainage or utility lines. Fill is to be inspected by a professional Geotechnical Engineer testing firm employed by the owner. Results of the test shall be furnished to the owner's representative. Contractor shall pay for any retesting.
- 18. The contractor shall field verify the exact horizontal and vertical location of existing manholes, sanitary sewer lines, and water lines at the point of connection prior to the commencement of construction or ordering materials, report any discrepancies to the engineer immediately.
- 19. Repair existing pavement, curbs, walks, landscaping, etc. that are damaged by construction activities to a like new condition at no additional cost to the owner.
- 20. Sanitary sewer services shall be 6" diameter PVC (SDR 35) at a minimum slope of 1.0% unless shown otherwise on the drawings. Lines shall start 5' beyond the buildings. Coordinate connection points with the building plumbing drawings. Provide a minimum 30" of cover over all sewer services in grass areas and 48" of cover in paved areas.
- 21. Some utilities can be located by call the "Tennessee One Call" System, Inc. The contractor shall call "Tennessee One Call" (1-800-351-1111) 72 hours prior to proceeding with any excavation.
- 22. The concrete caps and encasements on water and sewer lines shall be
- 23. The contractor shall be responsible for coordinating the sequencing of construction for all utility lines so that water lines do not conflict with sanitary sewers, sanitary sewer services, storm sewers, or any other utility or structure, existing or proposed.

a minimum of 6" thick. Use 3000 PSI concrete

- 24. All trenches cut in existing roads or drives shall utilize a clean saw cut and shall be backfilled (100%) to final sub grade with #57 stone. Repair
- pavement in accordance with the local governing agency requirements. 25. Existing manholes located in fill/cut areas shall be adjusted to ensure that the top of casting is flush with the finished grade.
- 26. The contractor shall maintain 10 feet horizontal separation between sanitary sewer lines and water lines. Where these criteria cannot be met, the contractor shall maintain 18" vertical separation between water and sewer lines.
- 27. Any proposed fire line shall be installed by a sprinkler contractor licensed in the State of Tennessee. The fire line shall be flushed and tested in accordance with NFPA requirements.
- 28. Any proposed gas line construction and installation shall be coordinated with the local gas company by the contractor.
- 29. Any proposed electric line construction and installation shall be coordinated with the local electric company by the contractor.
- 30. Any proposed telephone line construction and installation shall be coordinated with the local telephone company by the contractor.
- 31. Any siamese stand pipe to be galvanized steel
- 32. The flow test information shown on this plan is for general information purposes only. It shall be the sprinkler designer / contractor's responsibility to have their own flow test preformed and their sprinkler design shall be based on their flow test.
- 33. If a double detector check valve assembly is located outside of the building the pit shall include a ¼ hp sump pump. Use Myers model S25 or approved equal. Discharge pipe shall extend to the surface and be directed toward the street. Provide a 12-inch by 12-inch by 4-inch thick concrete splash pad at the discharge point. The contractor shall coordinate with the electrical contractor to insure electrical service is provided from the building to the pit for electrical service for the pump.
- 34. If a reduced pressure backflow preventer is located outside of the building it shall be installed with a heated enclosure. Enclosure shall be a Safe-T-Cover (6-inch model) with heat or approved equal. Heat shall be Safe-T-Cover model HCH2000-120 (2,000 watt, 120 volt, single phase, 16.66 amp) or approved equal. The contractor shall confirm the enclosure model number with the Safe-T-Cover supplier based on the model / manufacturer of backflow preventer that the contractor is using. The contractor shall coordinate with the electrical contractor to insure electrical service is provided from the building to the enclosure for electrical service for the heat.
- 35. Any 1-inch irrigation reduced pressure backflow preventer shall be installed with a heated enclosure. Enclosure shall be a Safe-T-Cover (1-inch model) with heat or approved equal. Heat shall be Chromalox self-regulating heating cable (5 watt per foot, 120 volt, 10 amp) or approved equal. The contractor shall confirm the enclosure model number with the Safe-T-Cover supplier based on the model / manufacturer of backflow preventer that the contractor is using. The contractor shall coordinate with the electrical contractor to insure electrical service is provided from the building to the enclosure for electrical service for the heat.
- 36. The contractor shall have the meters, backflow devices and enclosures approved by local water district before ordering or installing.
- 37. If irrigation is provided it will require a separate tap, meter and RPBP. 38. A variance from Metro Water Services is required if DDCVA or RPBP
- are to be located inside the building.

Site Grading, Drainage & **Erosion Control Notes**

- 1. The disturbed area for this project is approximately ±5.1 acres.
- 2. The contractor shall comply with all pertinent provisions of the manual of accident prevention and construction issued by AGC of America, Inc. and the safety and health regulations of construction issued by the U.S. Department of Labor.
- 3. The contractor shall call "Tennessee One Call" (811) 72 hours prior to proceeding with any excavation.
- 4. If any springs or underground streams are exposed during construction, permanent French drains may be required. The drains shall be specified and located during construction as required by the conditions which are encountered, and shall be approved by the engineer.
- Stockpiled topsoil or fill material shall be treated so no sediment run-off will contaminate surrounding areas or enter nearby streams.
- Clean silt barriers when they are approximately 50% filled with sediment or as directed by the owner's representative. Silt barriers shall be replaced as effectiveness is significantly reduced, or as directed by the owner's representative.
- 7. All new pipes under existing paved areas shall be backfilled to the top of subgrade with #57 crushed stone.
- 3. Sediment removed from sediment control structures is to be placed at a site approved by the local governing authority. It shall be treated in a manner so that the area around the disposal site will not be contaminated or damaged by the sediment in the run-off. Cost for this treatment is to be included in the bid price for earthwork. The contractor shall obtain the disposal site as part of his work.

- 9. Reinforced concrete storm drainage pipe shall be Class III. Corrugated metal pipe shall be 14 gauge unless otherwise noted.
- 10. Minimum grade on asphalt or concrete paving shall be 1.0%.
- 11. Construct silt barriers before beginning any grading operations.
- 12. This grading & drainage plan is not a determination or guarantee of the suitability of the subsurface conditions for the work indicated. Determination of the subsurface conditions for the work indicated is solely the responsibility of the contractor.
- 13. Do not disturb vegetation or remove trees except when necessary for
- 14. Top of grate elevations and location of coordinates for drainage structures shall be installed as shown on the plan unless otherwise noted. The grates shall slope longitudinally with the pavement grades.
- 15. Any site used for disposal and/or stockpile of any material shall be properly permitted for such activity. It is the responsibility of the contractor to see that all required permits are secured for each property utilized. A copy of the approved permit must be provided to the inspector prior to commencement of work on any property. Failure to do so may result in the contractor removing any illegally placed material at his own expense.
- 16. Respread topsoil (6 inch minimum thickness), seed, and straw all disturbed areas as soon as possible after final grading is completed, unless otherwise indicated. Contractor shall take whatever means necessary to establish permanent soil stabilization.
- 17. Proposed contour lines and spot elevations are the result of an engineered grading design and reflect a planned intent with regard to drainage and movement of materials. Should the contractor have any question of the intent or any problem with the continuity of grades, the engineer shall be contacted immediately.
- 18. All cut and fill slopes shall be 3 horizontal to 1 vertical or flatter unless otherwise indicated on plans.
- 19. Positive drainage shall be established as the first order of work and shall be maintained at all times during and after construction. Soil softened by perched water in foundation and pavement areas must be undercut and replaced with suitable fill materials.
- 20. Remove sediment from all drainage structures before acceptance by local governing agency, or as directed by the owner's representative
- 21. Contractor shall conform to all applicable codes and obtain approval as necessary before beginning construction.
- 22. Remove the temporary erosion and water pollution control devices only after a solid stand of grass has been established on graded areas and when in the opinion of the owner's representative, they are no longer needed.
- 23. Provide temporary construction access(es) at the point(s) where construction vehicles exit the construction area. Maintain public roadways free of tracked mud and dirt.
- 24. All earthwork, including the excavated subgrade and each layer of fill, shall be monitored and approved by a qualified geotechnical engineer, or his representative.
- 25. All fill material on this project shall be approved by the geotechnical engineer prior to placement. This material shall be placed in lifts and compacted as directed by the geotechnical engineer. The contractor shall be responsible for employing a geotechnical engineer if one is not provided by the owner.
- 26. All drainage construction materials and installation shall conform to the requirements and specifications of the local governing agency.
- 27. It shall be the contractor's responsibility to waste excess earth material off site at no additional cost to the owner. The contractor shall first offer the excess material to the owner. If not accepted by the owner, the contractor shall dispose of earth material off site. It shall also be the contractor's responsibility to import suitable material (at no additional cost to the owner) for earthwork operations if sufficient amounts of earth material are not available on site.
- 28. The contractor shall check all existing grades and dimensions in the field prior to beginning work and report any discrepancies to the engineer. Commencement of any grading work constitutes the contractor's acceptance of the existing grade as matching those shown
- 29. Strip topsoil from all cut and fill areas and stockpile. Upon completion of general grading respread the topsoil over all disturbed areas, to a minimum depth of 6". Contractor shall supply additional topsoil if insufficient quantities exist on site. Remove any excess topsoil from
- 30. The contractor shall take special care to compact fill sufficiently around and over all pipes, structures, valve stems, etc., inside the proposed paved areas to avoid settlement. Any settlement during the warranty period shall be restored by the contractor at no additional cost to the
- 31. In no case shall slope height, slope inclination, or excavation depth, including trench construction, exceed those specified in local, state and federal regulations, specifically the current OSHA Health and Safety Standards for Excavations (29 CRF Part 1926) shall be followed.
- 32. All fill slopes and cut slopes on this project shall be reviewed by the owner's geotechnical engineer during construction to confirm that the slopes are (will be) stable. It is the contractor's responsibility to have this confirmation in writing from the geotechnical engineer.
- 33. All fill on this project shall be installed and compacted in accordance with the owner's geotechnical engineer's recommendation. The owner's geotechnical engineer shall review all filling operations to confirm the earthwork is properly installed and compacted. It is the contractor's responsibility to have this conformation in writing from the geotechnical engineer.
- 34. Relocation of existing plant materials shall be coordinated with the owner and relocated to a designated area on site.
- 35. All horizontal and vertical information of proposed culverts shown hereon which accept/discharge flows to/from existing channels are approximate utilizing topographic drawings. The final horizontal and vertical alignments shall be field located by the contractor prior to the ordering of materials or commencement of construction and shall notify the engineer of any discrepancies to what was designed.
- 36. The contractor shall coordinate the exact location of the storm drain connections at the building with the plumbing plans.
- 37. The location of all diversion swales and ditches shall be field adjusted to avoid trees as possible. The contractor shall walk the alignment of these swales and ditches in the field to verify avoidance of trees.

Stormwater Pollution Prevention Plan Notes

- 1. The contractor is responsible for making sure that a copy of the SWPPP is retained on-site at or near the construction entrance. If a construction trailer in not available, the contractor shall provide a waterproof enclosure near the construction entrance to place the SWPPP. In addition to the SWPPP, the contractor shall make certain that the following information must also be posted at the construction site (in a construction trailer or in the waterproof enclosure):
 - a) A copy of the notice of coverage (NOC) with the NPDES permit tracking number for the construction project number
 - b) Name, company name, email address, telephone number and address of the project site owner or a local contact person

d) The location of the SWPPP if an on-site location for

c) A brief description of the project

storing the plan is not available.

the portion of the site that he/she purchases.

- 2. The owner of this project site will provide erosion control measures as shown on this SWPPP. Once the owner sells this property, the new property owner will be required to obtain coverage under this permit from the governing federal, state and local agencies and the new property owner shall assume operational control and responsibility for
- 3. Prior to the commencement of any clearing or grubbing, the contractor shall erect "construction fencing", tree protection fencing, caution tape, etc. along the limits of disturbance to protect trees, stream bank buffers, etc. that are not to be disturbed.
- 4. Prior to any type of construction activity, the contractor shall install the stone based construction exit, the silt fence and the sediment traps/basins when indicated on the SWPPP. Additional erosion control measures such as rock check dams, diversion swales, temporary creek crossings, temporary mulching of disturbed areas, final seed and straw application and general erosion control maintenance shall be provided as construction progresses and these measures become necessary. The contractor shall be responsible for implementing all of the erosion control measures.
- All erosion control measures shall be installed and maintained in accordance with the manufacture's specifications and recommendations. It is the purpose of all control measures to slow runoff so that rill and gully formation is prevented. The contractor shall inspect the control measures periodically and replace and/or modify the controls for relevant site situations.
- Where the application of temporary or permanent grass seed is specified as part of the SWPPP, the contractor shall use an appropriate grass seed mixture for the time of year that the seed is sowed. Use fescue during the spring and summer months and a mixture of fescue and winter rye during the fall and winter months. Sow at a rate of 6 lbs. per 1000 sq.ft. of area. Provide adequate amounts of water to establish a healthy stand of grass. If sediment escapes the construction site, it is the contractor's
- contractor shall obtain the permission of the landowner where the sediment has accumulated before removal can begin. If sediment enters a stream, the contractor must also gain the written permission of the State before remediation/restoration can begin. The contractor shall remove sediment from sediment traps, silt fences,

sedimentation ponds, and other sediment controls as necessary and

responsibility to remove the sediment that has escaped the site. The

- must be removed when capacity has been reduced by 50%. 9. Litter, construction debris and construction chemicals exposed to storm water shall be picked up and removed from the site to prevent them from becoming a pollutant source for storm water discharges. After use, materials used for erosion prevention and sediment control should be
- removed from the site. 10. There are no other construction activities or industrial activities associated with this project site that are covered under a separate
- 11. There are no streams or wetlands on or near this project site, therefore no additional permits associated with these features are required. 12. All earth stockpiles, whether on the project site or off-site shall include

erosion control measures to prevent the material from be washed from

- the site by storm water runoff. 13. Clearing and grubbing must be held to the minimum necessary for
- grading and equipment operation. 14. Construction must be phased for projects in which over 50 acres of soil will be disturbed. Areas of the completed phase must be stabilized within 14 days (7 days for slopes ≥ 35%). No more than 50 acres of active soil disturbance is allowed at any time during the construction
- 15. For projects that have a disturbed area of greater than 50 acres, the contractor shall provide a phasing plan to only disturb 50 acres or less at one time. Submit the phasing plan to the state and local agencies for
- 16. Erosion prevention and sediment control measures must be in place and functional before earth moving operations begin and must be constructed and maintained throughout the construction period. Temporary measures may be removed at the beginning of the workday,
- but must be replaced at the end of the workday. 17. The contractor shall maintain a rain gauge and daily rainfall records at
- 18. The contractor shall initiate stabilization measures in portions of the site where construction activities have temporarily or permanently ceased. Temporary or permanent soil stabilization at the construction site must be completed no later than 14 days (7 days for slopes ≥ 35%) after the construction activity on that portion of the site has temporarily or permanently ceased.
- 19. The contractor shall construct temporary diversion swales to divert off-site runoff from crossing the disturbed areas. These diversion swales, when necessary, shall be field located to avoid existing trees wherever possible.
- 20. No work shall be allowed in or around streams or wetlands without the proper permits. Prior to the commencement of any construction activities in these areas, the contractor shall obtain a copy of the permits from the property owner, which allows this work. He shall not begin work without obtaining a copy of these permits or stiff fines from the federal and state agencies may be levied.
- 21. Muddy water to be pumped from excavation and work areas must be held in settling basins or filtered prior to its discharge into surface

- waters. Water must be discharged through a pipe, well-grassed or lined channel or other equivalent means so the discharge does not cause erosion and sedimentation. Discharged water must not cause an objectionable color contrast with the receiving stream.
- 22. After construction in complete, all disturbed areas, which are not covered with impermeable surface (i.e. asphalt, concrete, buildings, etc.), shall be covered with topsoil (4-inch thick minimum), grass seed and straw. The contractor shall maintain the seed and straw until a solid, healthy stand of permanent grass covers the disturbed areas.
- 23. Silt fence shall be used along the lower edge of disturbed areas that have sheet flow runoff. Where runoff is concentrated (such as swales and ditches), bumpus fences or rock check dams shall be used to slow the velocity and allow settling of sediment.
- 24. All construction and waste material shall be collected and removed from the site on a periodic basis. All construction and waste material shall be located outside of any existing or proposed drainage ways and shall be covered and protected from the rain until they are removed from the site. Any liquid materials or chemicals stored on-site shall be located away from any existing or proposed drainage ways and a berm of sufficient height to contain the entire volume of the liquid shall be constructed to completely encompass and impound the stored materials to prevent a spill from flowing off of the site.
- 25. All soil, plants, trees and other vegetation in protected streams and wetlands and along the banks of same are protected by State law and therefore a prohibited from being removed. The contractor shall ensure that these areas remain undisturbed during construction. Contractor shall erect construction barriers or take other means necessary to insure that the areas remain protected.
- 26. The contractor shall employee a person to inspect the erosion control measures as required by the State and local agencies. The inspector must have successfully completed the "Fundamentals of Erosion Prevention and Sediment Control" course provided by the State. A copy of the certification or training record for inspector certification should be kept on site.
- 27. Inspections described in the Tennessee General Permit shall be performed at least twice every calendar week and shall be performed at least 72 hours apart. Inspect all erosion control measures, disturbed areas, storage of material areas, outfall points, construction access points, etc.

28. Inspections shall also be performed before anticipated storm events (or

series of storm events such as intermittent showers over one or more

measures where necessary to insure adequate control so that no silt

days), and within 24 hours after the end of a storm event of 0.5 inches or greater 29. Any inadequate control measures or control measures in disrepair shall be replaced or modified or repaired as necessary before the next rain event if possible, but in no case more than 7 days after the need is identified. The contractor shall provide additional erosion control

exits the project site.

- 30. Inspections shall be documented and include: the scope of the inspection, name and title of personnel making the inspection, the date of the inspection, major observations relating to the implementation of the storm water pollution prevention plan (including the location of discharges of sediment or other pollutants from the site and of any control device that failed to operate as designed or proved inadequate fro a particular location), and actions taken in accordance with the General Permit. Inspections documentation will be maintained on site and made available upon request. Inspection reports must be submitted to the State (TDEC) within 10 days of the request. Use the inspection report form provided in Appendix C of the General Permit and complete on a weekly basis.
- 31. Sediment removed from sediment control structures is to be placed at a site that has been permitted by local and state agencies. The contractor is responsible for obtaining the site to "waste" the sediment material. The sediment shall be treated in a manner so that the area around the disposal site will not be contaminated or damaged by the sediment in the storm water run-off. Cost of this treatment is to be included in the price for the earthwork.
- (7 days for slopes ≥ 35%) after final grading is completed, unless otherwise indicated. The contractor shall take whatever means necessary to establish permanent soil stabilization. Any areas that do not include construction activity for more than 14 days (7 days for slopes ≥ 35%) shall be temporarily covered with straw to help prevent

32. The contractor shall seed and straw all disturbed areas within 14 days

33. Remove sediment from all drainage structures, pipes and swales before

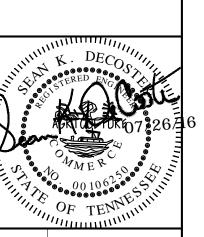
acceptance by the developer or the local governing agency.

when in the opinion of the owner's representative, they are no longer 35. During the period between the end of the construction and the establishment of the permanent vegetation, erosion control measures

shall remain in place and maintained. Once permanent vegetation is

34. Remove the temporary erosion and water pollution control devices only

- established, then the erosion control measures may be removed. 36. This SWPPP is developed in accordance with the Tennessee General NPDES Permit (TNR100000) for storm water discharges associated with construction activity (TNCGP), and is prepared using sound engineering practices. Civil Site Design Group P.L.L.C. personnel involved with the development of this plan have completed the design of vegetative and structural measures for erosion and sediment control
- course available from the State of Tennessee. 37. As instructed by Part III.F of the TNCGP, this plan and all attachments are hereby submitted to the local Environmental Assistance Center (EAC), along with the complete, correctly signed Notice of Intent (NOI). Construction will not be initiated prior to receipt of a Notice of Coverage (NOC) from the Tennessee Department of Environment and Conservation (TDEC).



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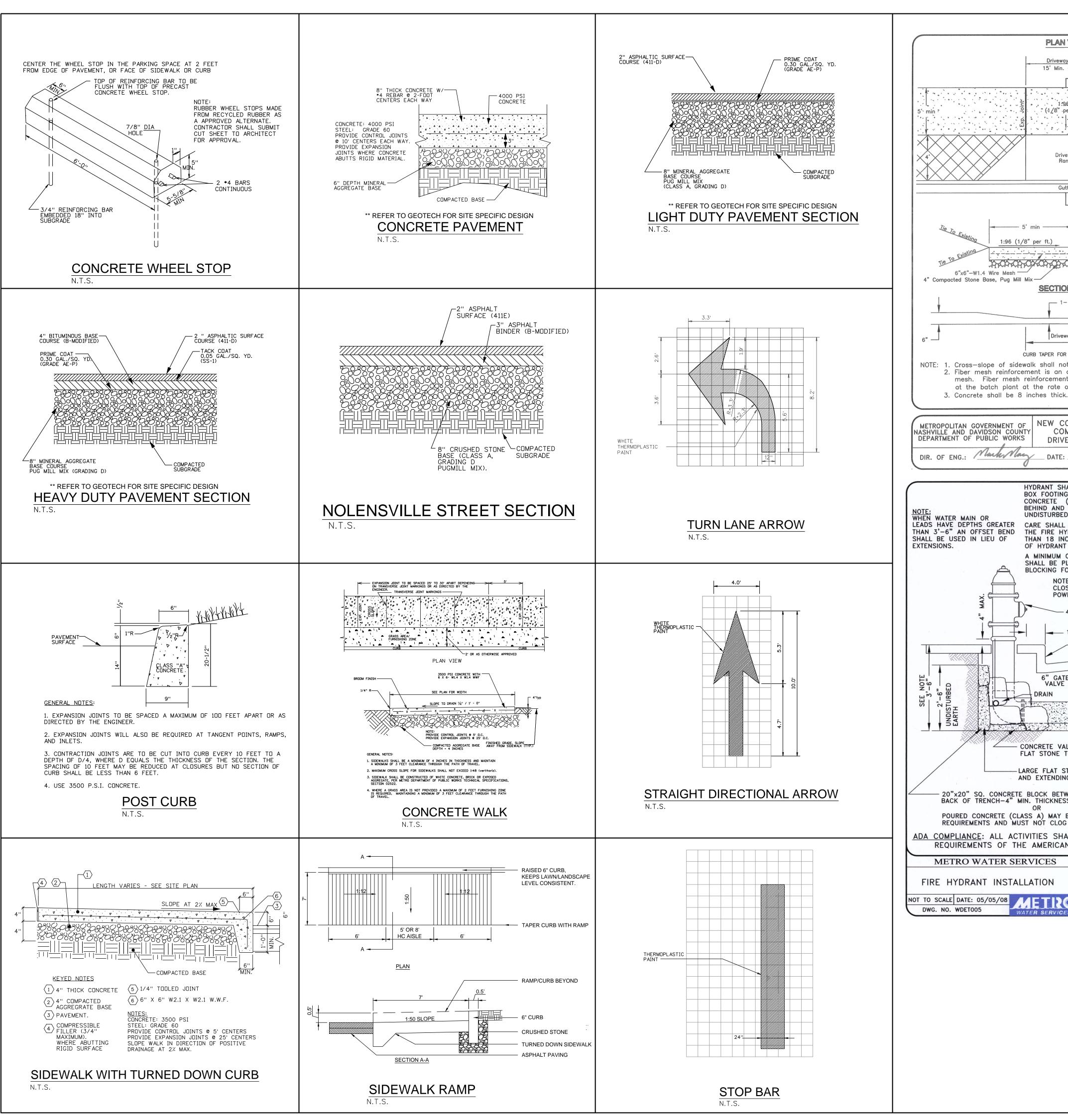
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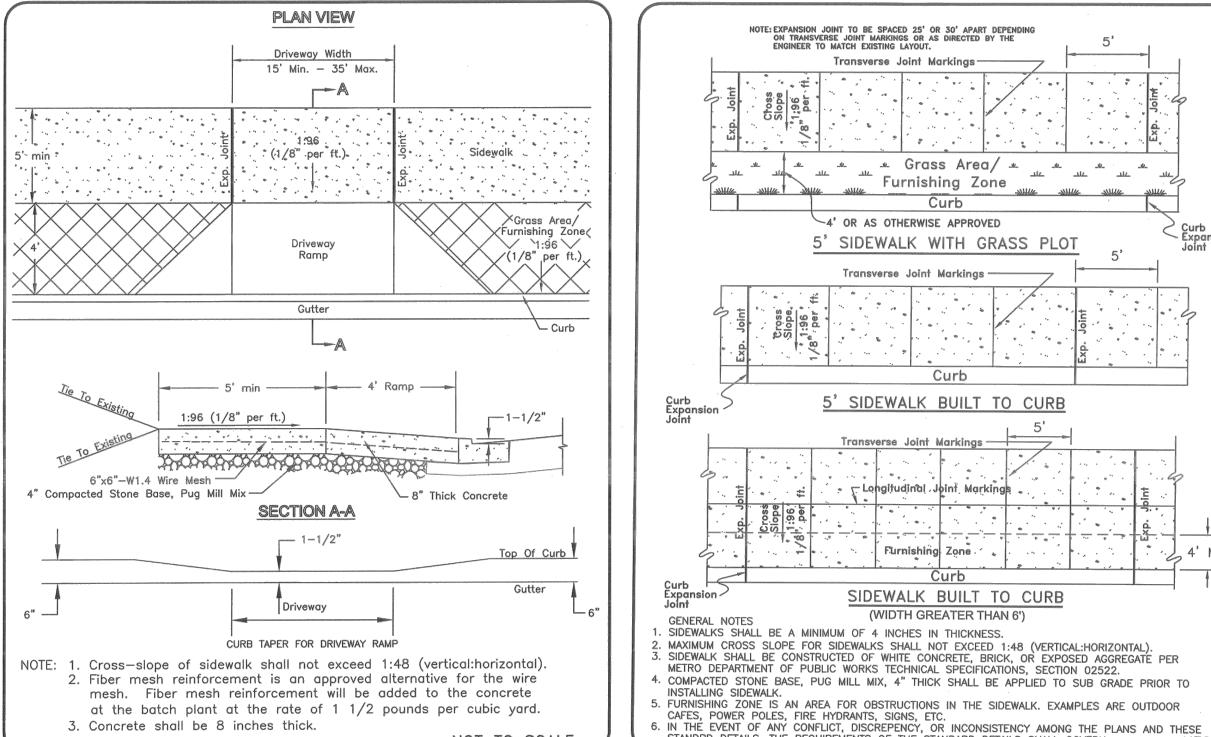
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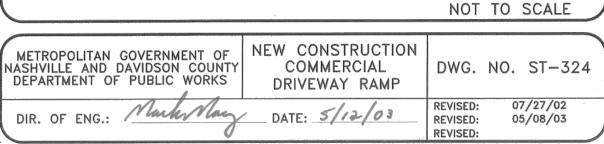
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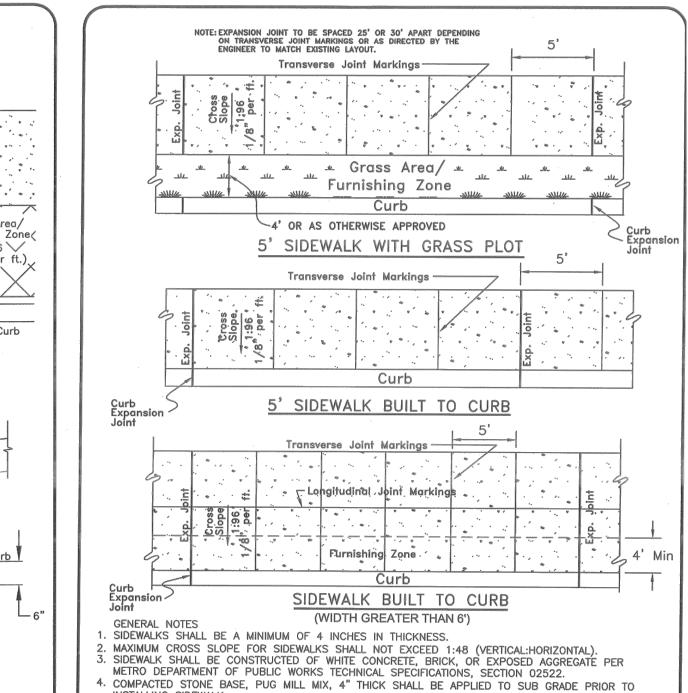
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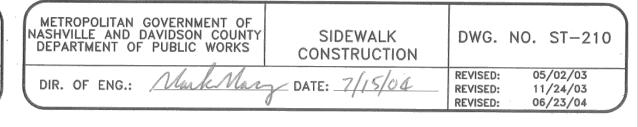
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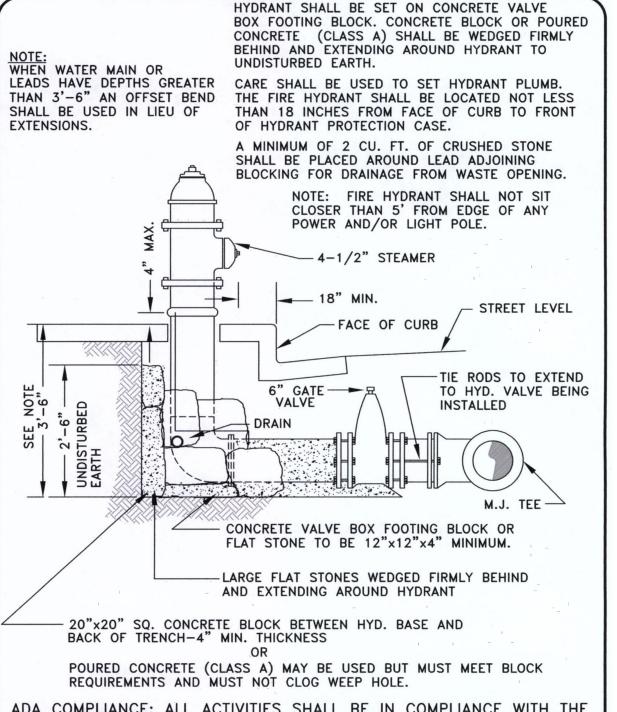


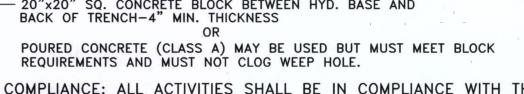




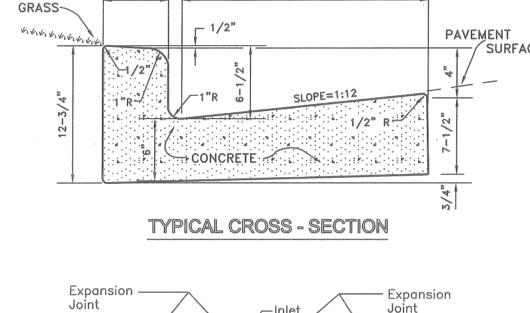


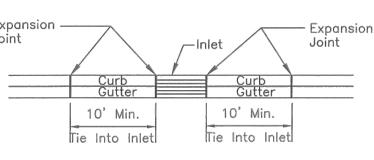
STANDRD DETAILS, THE REQUIREMENTS OF THE STANDARD DETAILS SHALL GOVERN.





METRO WATER SERVICES FIRE HYDRANT INSTALLATION LICENSED DISTRIBUTION OPERATOR	: ALL ACTIVITIES SHALL BE IN COMPLIANCE WITH THE NTS OF THE AMERICANS WITH DISABILITIES ACT (ADA)
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FRONT VIEW

GENERAL NOTES

- 1. Expansion joints to be spaced a maximum of 100 feet apart or as directed by the Engineer.
- 2. Expansion joints will also be required at tangent points, ramps, and inlets.
- 3. Contraction joints are to be cut into curb and gutter every 10 feet to a depth of D/4, where D equals the thickness of the section. The spacing of 10 feet may be reduced at closures but no section of curb and gutter shall be less than 10 feet.
- 1. There will be a minimum of 10 feet tie in at curb inlets on each side of the inlet. An expansion joint will be used on each side of the tie in.
- 5. Cost of contraction joints to be included in the unit bid price for concrete curb with gutter. NOT TO SCALE

	GOVERNMENT OF DAVIDSON COUNTY PUBLIC WORKS	STANDARD CURB WITH GUTTER	DWG. 1	NO. ST-200
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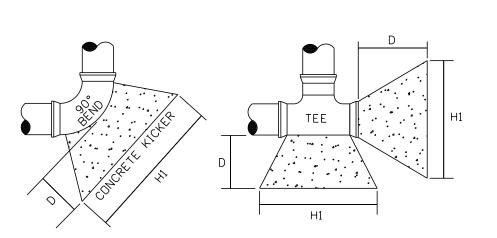
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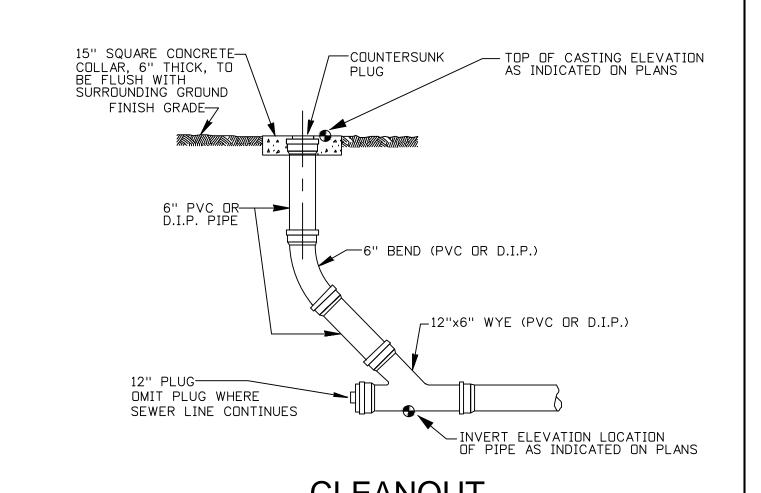
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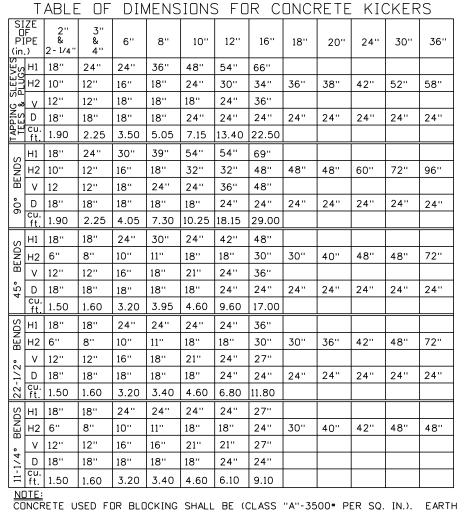


NOTE: SEE SEPARATE DETAIL FOR TABLE OF DIMENSIONS FOR CONCRETE KICKERS

CONCRETE KICKERS N.T.S.

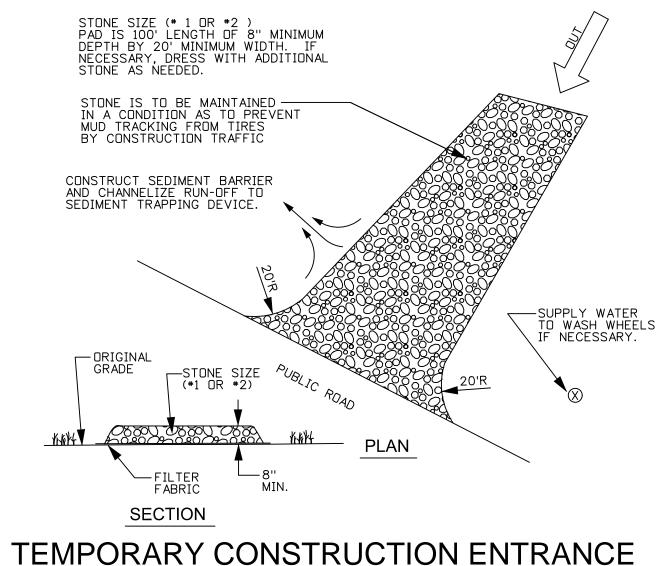


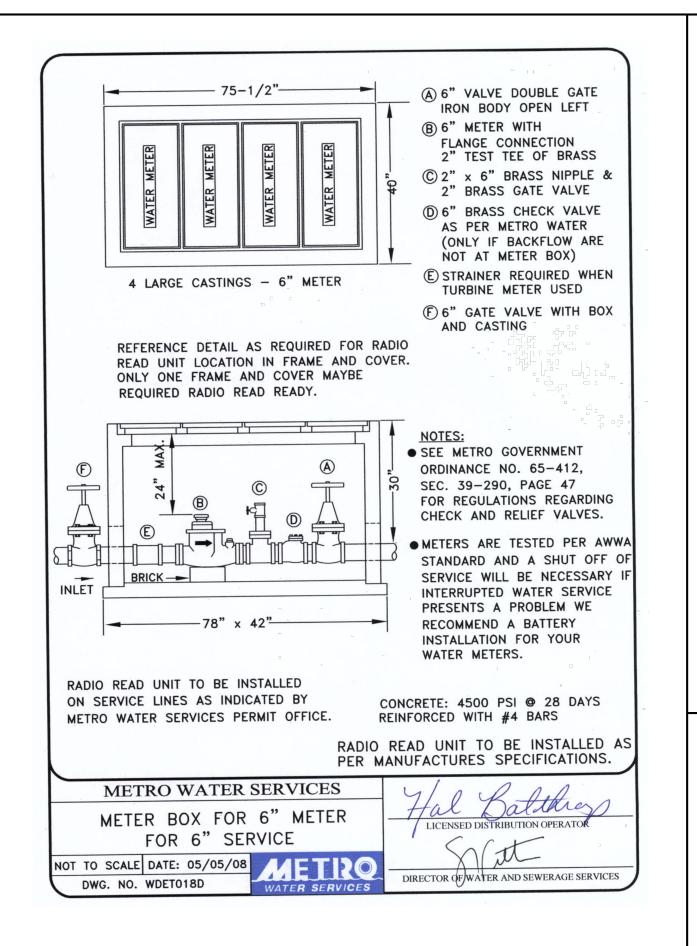
PAGE 1 OF 3

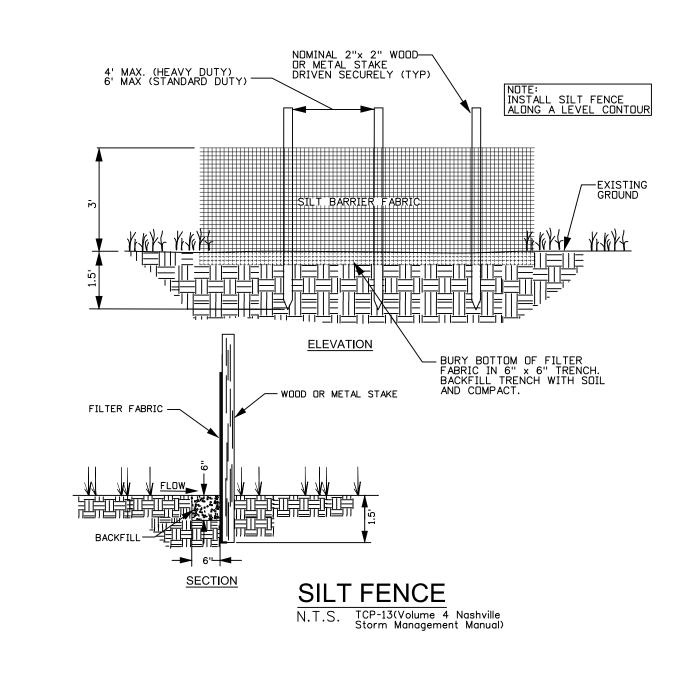


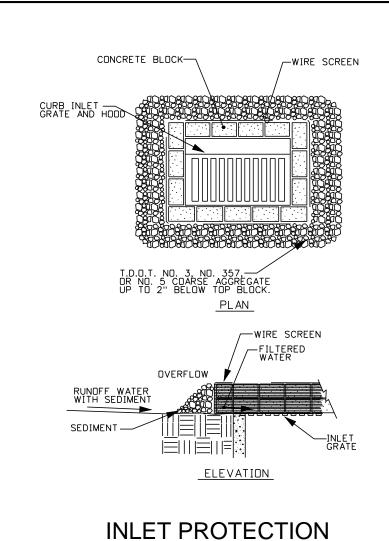
CONCRETE USED FOR BLOCKING SHALL BE (CLASS "A"-3500* PER SQ. IN.). EARTH PRESSURES ARE FIGURED AT (4000* PER SQ. FT.) BEARING AREA OF KICKERS SHALL BE INCREASED WHEN POURED AGAINST SAND, LOOSE FILL, WET EARTH, CINDERS, ETC TABLE BASED ON 225 P.S.I. OR 150 P.S.I. WORKING PRESSURE PLUS 50% WATER HAMMER

CONCRETE KICKER TABLE









GENERAL NOTES PAGE 2 OF 3 PRIOR TO PLACEMENT OF CRUSHED STONE OR FLOWABLE FILL THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE WILL BE NOTIFIED AND AN INSPECTION OF THE TRENCH WILL BE MADE BY A REPRESENTATIVE OF THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE. AT THE COMPLETION OF THE INSTALLATION OF THE CRUSHED STONE OR FLOWABLE FILL, THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE WILL BE NOTIFIED AND AN INSPECTION OF THE BACKFILL WILL BE MADE BY A REPRESENTATIVE OF THE DEPARTMENT OF PUBLIC WORKS. AFTER ACCEPTANCE OF THE BACKFILL BY THE REPRESENTATIVE OF THE DEPARTMENT OF PUBLIC WORKS PERMITS OFFICE, THE ASPHALT PAVEMENT CAN BE APPLIED.

N.T.S.

. INSPECTION PERSONNEL OF THE DEPARTMENT OF PUBLIC WORKS SHALL BE NOTIFIED BY CONTRACTOR/PERMITEE AT LEAST TWO (2) DAYS PRIOR TO REQUEST FOR

. THE WORK PERFORMED SHALL BE FREE FROM WORKMANSHIP DEFECTS FOR A PERIOD OF ONE (1) YEAR AFTER THE DATE OF ACCEPTANCE BY THE DEPARTMENT OF PUBLIC WORKS PERMIT OFFICE.

. EXISTING PAVEMENTS, BASES, CURBS & GUTTERS AND SIDEWALKS SHALL BE CUT AND BROUGHT TO A NEAT LINE BY USE OF AN AIR HAMMER, SAW OR OTHER SUITABLE EQUIPMENT. EXPANSION JOINTS REMOVED SHALL BE REPLACED

. THE MINIMUM WIDTH TO BE TRIMMED ON EACH SIDE OF THE TRENCH LINE, AS SEEN IN THE SECTION MAY BE WAIVED OR AMENDED UPON APPROVAL OF THE METRO INSPECTOR, HOWEVER, A MINIMUM WIDTH OF REPLACEMENT SHALL BE 4'-0" TO ALLOW

6. IF PERMANENT PAVEMENT REPAIRS CANNOT BE MADE WITHIN THREE (3) DAYS, THEN TEMPORARY REPLACEMENT SHALL BE MADE WITH 2" COLD MIX OR HOT BITUMINOUS SEAL COAT OVER COMPACTED CRUSHED STONE. PERMANENT PAVEMENT REPAIR TO BE COMPLETED WITHIN THE TIME PERIOD AS PER METRO CODE 13.20.

ALL EXCAVATIONS MADE WITHIN PUBLIC RIGHT-OF-WAY REQUIRE EXCAVATIONS AND STREET CLOSURE PERMITS FROM THE DEPARTMENT OF PUBLIC WORKS PRIOR TO COMMENCING WORK AS PER METRO CODE 13.20.

FLOWABLE FILL WILL BE REQUIRED ON ALL ARTERIALS, COLLECTORS AND DOWNTOWN STREETS. FLOWABLE FILL SHALL MEET THE REQUIREMENTS IN TENNESSEE DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS SECTION 204, EXCEPT AS MODIFIED BY PUBLIC WORKS TECHNICAL SPECIFICATIONS 02225, LATEST REVISION.

IN THE EVENT OF ANY CONFLICT, DISCREPANCY, OR INCONSISTENCY AMONG THE PLANS AND THESE STANDARD DETAILS, THE REQUIREMENTS OF THE STANDARD DETAILS SHALL

. ALL REPAIRS SHALL INCLUDE FULL LANE WIDTH RESURFACING EXCEPT WHEN UTILIZING INFRARED TECHNOLOGY. SEE INFRARED SPECIFICATIONS ATTACHED. THERE WILL BE A MAXIMUM OF 40 FT LONGITUDINAL REPAIR WHEN USING INFRARED TECHNOLOGY ON AN EXCAVATED PATCH.

. ALL REPAIRS SHALL UTILIZE A 1-FOOT CUTBACK ON ALL SIDES EXCEPT THE FOGE OF NOT TO SCALE

GENERAL NOTES CONTINUED:

TCP-20(Volume 4 Nashville

Storm Management Manual)

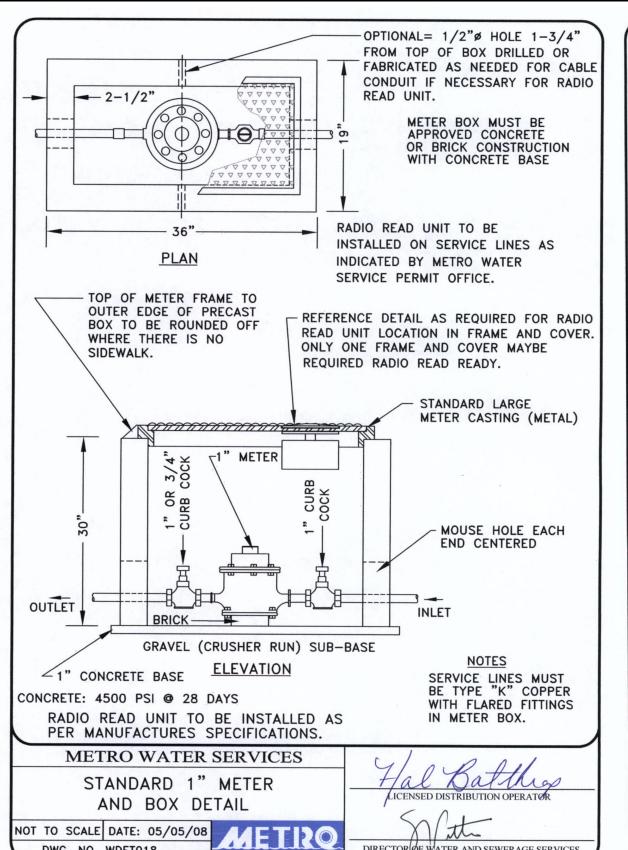
- 12. NEW UTILITY CUTS WILL BE MILLED AND PAVED TO ANY EXISTING UTILITY CUT OR DAMAGED PAVEMENT WITHIN 10-FEET. IF EXISTING CUT OR DAMAGED PAVEMENT IS LESS THAN 10-FEET IN LENGTH, THE EXISTING CUT OR DAMAGED PAVEMENT SHALL ALSO BE MILLED AND PAVED.
- 13. ASPHALT REPAIR ADJACENT TO CURB AND GUTTER ALONG A ROADWAY GREATER THAN 24-INCHES SHALL HAVE FULL LANE WIDTH PAVING.
- WHEN GRADED STONE (I.E. #57, #67, #78 STONE) IS USED THERE IS GENERALLY NO COMPACTION EQUIPMENT REQUIRED. THE MATERIAL DOES, HOWEVER, NEED TO BE PUT IN THE TRENCH IN APPROXIMATELY 12-INCH LIFTS.
- 15. GRADED STONE PLACED IN TRENCH SHOULD BE CAPPED WITH 8 TO 12-INCHES OF PUG MIX (MIX IS ESSENTIALLY TYPE A BASE, GRADE D, OR MORE COMMONLY KNOWN AS "CRUSHER RUN"). SEE TDOT STANDARD SPECIFICATION 303.07.
- 16. TYPE "A" BASE, GRADE "D" CAN BE USED FOR THE ENTIRE BACKFILL AND COMPACTED BY MECHANICAL METHODS IN NO MORE THAN 6-INCH LIFTS AS PROVIDED IN SECTION 204.11 OF TDOT STANDARD SPECIFICATIONS.
- 17. THE PUG MIX SHOULD BE COMPACTED IN 6-INCH LIFTS WITH A STEEL SHELL ROLLER OR OTHER MECHANICAL VIBRATORY COMPACTION EQUIPMENT. SEE TOOT STANDARD SPECIFICATIONS 303.08 AND 303.09. MATERIAL SHOULD BE ALLOWED TO CURE UNTIL ALL THE MOISTURE IS GONE FROM STONE (USUALLY 24-48 HOURS).
- 18. THE TRENCH SHOULD THEN HAVE 11-INCHES OF BINDER PLACED LEVEL WITH THE ROADWAY IN A MINIMUM OF TWO (2) LIFTS AND COMPACTED WITH MECHANICAL COMPACTION EQUIPMENT.
- 19. THE BINDER SURFACE SHALL BE MILLED OR HEATED USING INFRARED TECHNOLOGY TWO 2-INCHES IN DEPTH AND REPLACED WITH TWO (2) INCHES OF SURFACE MIX AND COMPACTED WITH MECHANICAL COMPACTION EQUIPMENT.
- 20. INTERSECTION REPAIRS WILL ONLY REQUIRE FULL LANE WIDTH PAVING.
- 22. ANY DISTURBED PAVEMENT MARKINGS MUST BE RESTORED TO CURRENT METRO
- 23. DIAGONAL REPAIRS WILL BE REQUIRED TO BE SQUARED OFF AND MILLED AND PAVED. NO INFRARED TECHNOLOGY ALLOWED ON THIS TYPE OF REPAIR.
- 24. ALL LONGITUDINAL REPAIRS MORE THAN 40 FT IN LENGTH WILL BE REQUIRED TO BE MILLED AND PAVED.

NOT TO SCALE

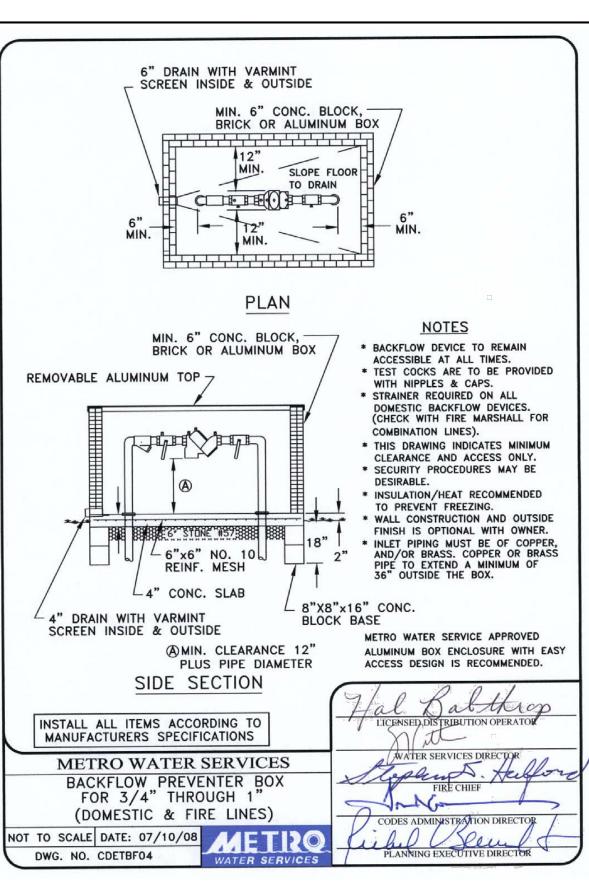
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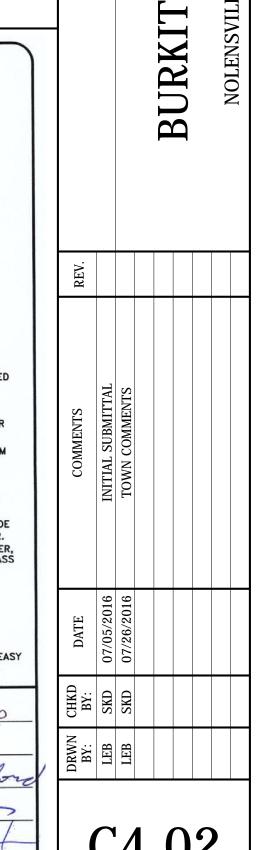
PAGE 3 OF 3

METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY DEPARTMENT OF PUBLIC WORKS FLUSH TRENCH DWG. NO. ST-270b REPAIR NOTES DIR. OF ENG.: Mark Macy DATE: 12/2/08 03/31/06 REVISED: 11/17/08



DIRECTOR OF WATER AND SEWERAGE SERVICES





JOB NO.: 16-024-01

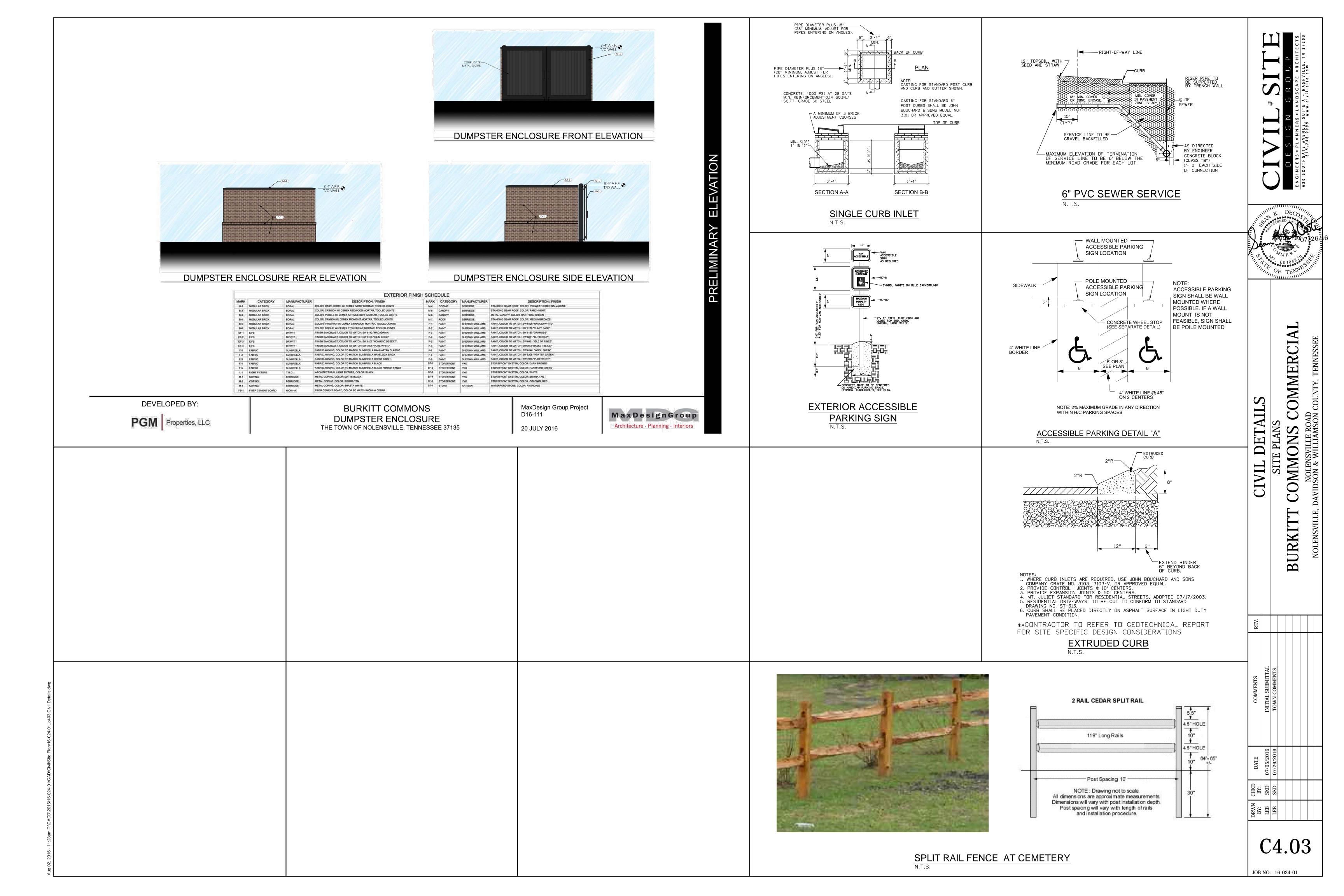
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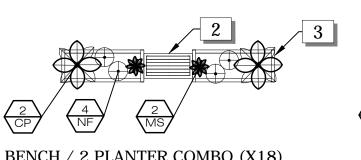
2" COMPACTED COLD MIX OR HOT MIX LEVEL WITH ROADWAY FLOWABLE FILL (IF REQUIRED BY METRO PUBLIC WORKS) TEMPORARY PATCH CRUSHED STONE SHALL HAVE 28 DAY COMPACTED ___ COMPRESSIVE STRENGTH IN 6" LAYERS AND SHOULD BE NO #57 OR #67 CRUSHED STONE COMPACTED --- 4'-0" MIN. ---11" OF BITUMINOUS BINDER (B-M2) CRUSHED STONE COMPACTED STEP 2 11" OF BINDER IN 6" LAYERS STONE COMPACTED IN 6" LAYERS REMOVE 2" OF BINDER BY MILLING OR INFRARED AND / PLACE ASPHALTIC SURFACE MIX (411D) 9" OF BITUMINOUS BINDER STEP 3 COMPACTED -30 DAYS FINAL IN 6" LAYERS SURFACE NOT TO SCALE

METROPOLITAN GOVERNMENT OF NASHVILLE AND DAVIDSON COUNTY DEPARTMENT OF PUBLIC WORKS REPAIR DWG. NO. ST-270 01/06/06 DIR. OF ENG.: //www/Vly DATE: 1/13/09 REVISED: 04/01/08 REVISED:

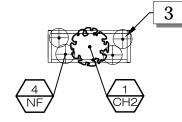
METROPOLITAN GOVERNMENT OF FLUSH TRENCH NASHVILLE AND DAVIDSON COUNTY DWG. NO. ST-270d DEPARTMENT OF PUBLIC WORKS REPAIR NOTES 07/31/02 DIR. OF ENG .: Wark Way DATE: 12/8/08 09/10/04 11/17/08 REVISED: REVISED:



LANT S	CH	ED	ULE L1.0 OVERALL			
EES	CODE	QTY	COMMON NAME / BOTANICAL NAME	CONT	CAL	SIZE
	PP	8	Princeton Sentry Ginkgo / Ginkgo biloba `Princeton Sentry` 5` Clear Trunk. Upright Growth. Evenly Branched. Full Symmetrical Crown. See Tree Specifications. Matched	B & B	2"Cal	12` HT
0	IN	24	Nellie Stevens Holly / Ilex x `Nellie R Stevens` Full to Base. Full Dense Form. See Tree Specifications	B & B	2"Cal	8` HT
$\overline{\mathbf{O}}$	LT	5	Tulip Poplar / Liriodendron tulipifera 5` Clear Trunk. Single; Straight Central Leader. Full Upswept Branching. Even Branching. See Tree Specifications.	B & B	3"Cal	12`-14` HT
$\overline{\odot}$	ZS	12	Arnold Tulip Poplar / Liriodendron tulipifera `Arnold` 5` Clear Trunk. Upright Growth. Evenly Branched. Full Symmetrical Crown. See Tree Specifications	B & B	2"Cal	12`-14` HT
$\overline{\bullet}$	AS	8	Mushishino Zelkova / Zelkova serrata `Musishino` 6` Clear Trunk. Single; Evenly Branched. Full Symmetrcal Crown. See Tree Specifications.	B & B	3"Cal	14`-16` HT
TERIOR TREES	CODE	QTY	COMMON NAME / BOTANICAL NAME	CONT	CAL	SIZE
\odot	AH	23	Palisade American Hornbeam / Carpinus caroliniana `Palisade` 3` Clear Trunk. Strong Central Leader. Evenly Branched. Full Symmetrcal Crown. See Tree Specifications	B & B	3"Cal	12`-14` HT
RIMETER TREES	CODE	QTY	COMMON NAME / BOTANICAL NAME	CONT	CAL	SIZE
+	QN	10	Nuttall Oak / Quercus nuttallii 6` Clear Trunk. Single; Straight Central Leader. Evenly Branched. Full Symmetrcal Crown. See Tree Specifications. Matched	B & B	3"Cal	14`-16` HT
REET TREES	CODE	QTY	COMMON NAME / BOTANICAL NAME	CONT	CAL	SIZE
\bigcirc	CC2	9	Oklahoma Redbud / Cercis canadensis `Oklahoma` Single Trunk. Evenly Branched. Full Symmetrcal Crown. See Tree Specifications	B & B	3"Cal	12`-14` HT
HRUBS	CODE	QTY	COMMON NAME / BOTANICAL NAME	CONT		
0	BS	8 62	American Boxwood / Buxus sempervirens Full; Dense Form. Unsheered	18"x18" #3 Container		
\bigoplus	BX	02	Green Velvet Boxwood / Buxus x `Green Velvet` Full; Dense Form. Unsheered	#3 Container		
*	CA	103	Karl Foersters Feather Reed Grass / Calamagrostis x acutiflora `Karl Foerster` Full; Dense Form	#1 Container		
	CH	42	Hummingbird Sweet Clethra / Clethra alnifolia `Hummingbird` Full; Loose Form	#1 Container		
	CJ	69	Bronze Beauty Cleyera / Cleyera japonica `Bronze Beauty` Full; Dense Form	18" HT		
ZWZ	SD	36	Slender Deutzia / Deutzia gracilis `Nikko` Full; Desne Form	18" HT		
**	DO	12	Autumn Fern / Dryopteris erythrosora `Brilliance`	#3 Container		
\bigcirc	GJ	2	Jade Butterfly Ginkgo / Ginkgo biloba `Jade Butterfly` B&B. Full. Well Branched.	36" HT		
0	HY	10	Limelight Hydrangea / Hydrangea paniculata `Limelight` TM Full, Heavy, Well Rooted, Dense Form	#3 Container		
\oplus	HQ	19	Snow Queen Oakleaf Hydrangea / Hydrangea quercifolia `Snow Queen` Full, Heavy, Well Rooted, Dense Form	#3 Container		
\odot	IC	16	Neddlepoint Holly / llex cornuta `Needlepoint` Full; Dense Form	18" HT		
\otimes	IS	18	Sky Pencil Japanese Holly / Ilex crenata `Sky Pencil` Full, Dense Upright Form	36" HT		
\bigcirc	JP	19	Sea Green Juniper / Juniperus x pfitzeriana `Sea Green` Full; Desne Form	#3 Container		
₹ • ¢	LC	105	Purple Pixie Loropetalum / Loropetalum chinense rubrum `Purple Pixie` Full; Dense Form	#1 Container		
\Diamond	MG	24	Maiden Grass / Miscanthus sinensis `Gracillimus` Full; Dense Container	#1 Container		
AND VERTILE	NW	47	Walkers Low Catmint / Nepeta x faassenii `Walkers Low` Full. Heavy. Well Rooted	#1 Container		
\odot	RF	65	Coneflower / Rudbeckia fulgida `Goldstrum`	#1 Container		
*	RH	46	Black-eyed Susan / Rudbeckia hirta Full; Dense	#1 Container		
e de la constante de la consta	TH	39	Hicks Yew / Taxus x media `Hicksii` Full; Desne Form	24" HT		
	VS	21	Chaste Tree / Vitex agnus-castus `Shoal Creek` Evenly Branched. Full Symmetrcal Crown. Shrub Form	#7 Container		
\bigoplus	WF	34	Eva Supreme Weigela / Weigela florida `Eva Supreme` Full; Dense Form	18" HT		
ROUND COVERS	CODE	QTY	COMMON NAME / BOTANICAL NAME	CONT		
	DG EV	48	Firewitch Cheddar Pinks / Dianthus gratianopolitanus `Firewitch` Install in Rows 16" O.C. Maxwell`s Cornish Heath / Erica vegans `Mrs. Maxwell`	4"pot		
	EF	128	Maxwell's Cornish Heath / Erica vegans 'Mrs. Maxwell' Triangular Pattern 24" O.C. Purple-leaf Winter Creeper / Euonymus fortunei `Colorata`	#1 Container 1 Quart		
			20" Triangular Spacing			
a b a a a b a a a a a a a a a	SC2	74	Selection of Perennial, Annuals, and Grasses / Seasonal Color Install an appeasing layered look.	4"pot		







1 PLANTER (X3)

2 BENCH / 1 PLANTER (X11)

PLA	NT S	SCI	HEDULE PLANTERS.
SHRUBS	CODE	QTY	COMMON NAME / BOTANICAL NAME

SHRUBS	CODE	QTY	COMMON NAME / BOTANICAL NAME	CONT	
0	CH2	15	Horstmann Blue Atlas Cedar / Cedrus atlantica `Horstmann` Full;Dense. Container	#5 Container	
**	СР	36	Golden Mop Threadleaf False Cypress / Chamaecyparis pisifera `Golden Mop` Full; Desne. Container Grown	#3 Container	
	MS	36	Spearmint / Mentha spicata	1 Pint Containers	
\oplus	NF	132	Walkers Low Catmint / Nepeta x faassenii `Walkers Low` Full. Heavy. Well Rooted	#1 Container	

REFERENCE NOTES SCHEDULE L1.1 All trees should be planted in at least 100sf of soil surface area with a

SYMBOL DESCRIPTION QTY DETAIL

TREE GRATE MANUFACTURER-URBAN ACCESSORIES PRODUCT: 3` SQUARE BOSTON GRATE COLOR: NICKEL BRONZE INSTALLATION: STANDARD - SEE MANUFACTURER FINISH: BRUSHED CONTACT: JOYCE MOSTELLER (803) 781-4005

and in tree planters and tree grates. CU soil can only be installed by a licensed contract

MANUFACTURER: EQUIPARC PRODUCT: FP1621 COLOR: SILVER WOOD: IPE

PLANTER MANUFACTURER: EQUIPARC PRODUCT:EP4721 COLOR: SILVER

WOOD: IPE

depth of at least 3 ft. that has not been compacted. A structural soil system CU Soil is to be used in all planters along the building

The soil mixture made up of crushed stone, clay loam, and a hydogel stabilizing agent. The mixture creates an interlocking framework of gravel. The cavities created by the framework are filled by soil. This allows for roots, air, nutrients, and water to pass through. The hydrogel is used to provide a consistency to the mix adhering the soil to the gravel. This mixture can be compacted to a sufficient level for pavements while maintaining a root zone for the tree.

Fescue Sod Install in all disturbed areas not landscaped or mulched MISCELLANEOUS Pine Straw Mulch Minimum 3" depth throughout all landscape beds around parking

NOTES ANY CHANGES TO THE PLANT MATERIAL WITHOUT THE APPROVAL OF HEIBERT+BALL MAY B AT THE TIME OF INSPECTION. PLEASE CONTACT H+B FOR ANY SUBSTITUTION REQUESTS.

LANDSCAPE NOTES: Before the landscape project is started, the chosen landscape contractor will contact the Landscape Architect for a detailed explanation of the landscape plan. All plant material provided shall be nursery grown and shall comply with the American Standard For Nursery Stock: ANSI Z60.1-1996, for size and quality. No substitutions as to type, size, or spacing of plant materials specified on this plan may be made without

written approval of owner and Landscape Architect. The quantities indicated on the plant list and plan are provided for the benefit of the contractor, but should not be assumed to always be correct. The landscape contractor assumes all responsibility for his or her own quantity calculations and the liability which pertains to those quantities and to any related contract documents and/or price quotations. The contractor is to verify the exact locations of all existing utilities. Take care to protect utilities that are to remain. Repair any damage according to local standards and codes, and at landscape contractor's

BED PREPARATION NOTES:

expense. Coordinate all construction with appropriate utility company.

1. Requirements shown are as per City Zoning Ordinance.

TO AVOID OVERHEAD UTILITY CONFLICTS:

immediately for coordination and field adjustment.

immediately for coordination and field adjustment

a. The fork occurs in the upper 1/3 of the tree.

4. The trunk and/or major branches shall not touch

8. Crown spread shall look proportional to the tree. 9. NO flush cuts or open trunk wounds or other bark injury 10. Root ball meets all ANSI standards and is appropriately sized

point on the tree.

vertical to the trunk.

DEFICIENCIES NOT ACCEPTED:

2. Crown thin/spasely foliated

4. Major Branches touching

Included bark

. Tip dieback on 5% of branches

TO AVOID OVERHEAD LIGHT POLE CONFLICTS

2. After installation, the landscape will be maintained by the owner.

performance bond reveals that the screening is not effective.

Substitutions are not allowed unless approved by Heibert+Ball, Land Design.

3. Additional screening may be required if the inspection for the release of the

shrubs not meeting these standards can be rejected at time of inspection.

2. Trees with forked trunks are acceptable if all the following conditions are met:

3. No branch is greater than 2/3 the diameter of the trunk directly above the branch.

6. Branching habit is more horizontal than vertical, and no branches are oriented nearly

7. Branches are evenly distributed around the trunk with no more than one major branch located directly above another and the crown is full of foliage evenly distributed around the tree

LANDSCAPE SHALL NOT OBSTRUCT

PROTECTION EQUIPMENT INCLUDING.

BUT NOT LIMITED TO, FIRE HYDRANTS

AND FIRE DEPARTMENT CONNECTIONS

SEE

VISIBILITY OR ACCESS TO FIRE

b. One fork is less than 2/3 the diameter of the dominant fork. c. The top 1/3 of the smaller fork is removed at the time of planting.

5. Several branches are larger in diameter and obviously more dominant.

COCC

In the event proposed canopy trees are in conflict (within 25') with proposed or existing overhead

utility locations, the landscape contractor shall stop work and contact Heibert+Ball, Land Design

In the event proposed canopy trees are in conflict (within 10') with proposed or existing light pole

All utility structures, transformers, meters, and/or units shall be screened with plant material tall enough to provide an effective screen. Structures not shown on landscape plans will be required

PLANT STANDARDS
The standards set forth in "American Standard for Nursery Stock" represent general guideline

TREE SPECIFICATIONS: ALL TREES SHALL HAVE THE FOLLOWING CHARACTERISTICS:

1. Deciduous trees shall have one dominant single straight trunk with the tip of the leader

on the main trunk left intact and the terminal bud on the central leader is at the highest

specifications only and will constitute minimum quality requirements for plant material. All plants must meet minimum size noted at the materials schedule. And meet the characteristics stated on the

drawing. All material installed on the site MUST meet or exceed these specifications. Any trees or

to be screened. If utilities are added to the site, contact Heibert+Ball, Land Design for screening

locations, the landscape contractor shall stop work and contact Heiber+Ball, Land Design

The objective of the bed preparation and planting notes herein is to develop and preserve landscape material according to our landscape plan. Included in that goal is a standard of achieving optimum health, including growth and appearance of all ornamental landscape plants, while recognizing the unique growing environment presented by each planting location. The chosen landscape contractor must perform percolation tests in areas of planting, especially in areas where plants are to be installed that do not tolerate wet conditions. If it is observed that soils to not percolate well, the landscape architect and owner are to be notified immediately and prior to any planting.

PLANT INSTALLATION:

Soil amendments shall be incorporated in the following manner; the soil surface shall be loosened by rototilling to a minimum depth of 18" (only when outside the drip line of existing trees). All materials over 1" in diameter shall be removed. The manure and organic compost mixture shall be evenly spread over the area at a rate of 12 cubic yards per thousand square feet, and shall be mixed thoroughly into the soil surface to a depth of 6 inches by means of a rototiller, soil mixer or similar apparatus. Adjusting agents (e.g. lime and sulfur) may be applied in conjunction at this time based on the soil tests.. When incorporating topsoil, it should be spread over the area to a minimum 4" compacted depth, and mixed lightly into the subsoil by means of a rototiller, soil mixer or similar apparatus.

Topsoil shall be taken from the top 18-24" of a well-drained site, and free from clay subsoil, stones, lumps, plants or their roots, sticks, stolons, and seeds, high salt content, and other materials harmful to plant life. Mix soil mixture lightly into the subsoil by means of a rototiller, soil mixer or similar apparatus. Fertilize all plant beds and planters with a complete slow release fertilizer which has a 2-1-2 NPK ratio to stimulate root growth. Fertilize planting beds at a rate that will provide 2-3 lbs. of actual nitrogen per 1000

square feet in the planting bed. Prior to seeding or sodding, fertilizer with a 10-10-10 NPK ratio shall be spread evenly over the surface at the rate of five pounds per thousand square feet. Never shall fertilizers be added to the soil of a new planting bed or lawn area with NPK ratios higher than 10-10-10. The diameter of the planting pit shall be at least six inches larger than the diameter of the planting ball for all trees and large shrubs. Trees and large shrubs shall be planted so 1/8 of the root ball is above final

grade (at least 2" of root ball). All plants are to be installed with mycorrhizae, following manufacturer's directions. The top soil material should taper out around plant crowns, particularly with perennials. Thoroughly water the ground bed cover after installation. Contractor shall mulch planting beds to a depth of 3", not allowing mulch depth over 1" against any tree trunk. Leave some organic matter on the surface.

All disturbed areas outside of planters and planting beds to be seeded unless otherwise noted on landscape plan. Seed type to be approved by Landscape Architect.

Turf areas shall be fine graded by contractor and free from stones, lumps, plants or their roots, sticks, stolons, and seeds, high salt content, and other materials harmful to plant life. Seed type to be approved by Landscape Architect. Sod areas shall be rolled smooth and sand added as needed

	City Landscape Notes
4	
	1. The Owner shall submit a Certificate of Landscape Compliance to the Building and Codes Department upon completion of the landscape
	installation.
	2. Upon submittal of a Certificate of Landscape Compliance contact Building and Codes to schedule a Landscape Inspection.

3. No Certificate of Occupancy shall be issued until all landscape materials are in place in substantial compliance with the approved 4. All trees and shrubs shall be tagged according to species. Tags shall not be removed until after the Site Inspection for the issuance of a Certificate of Occupancy.

5. Any plant material that dies, turns brown or defoliates shall be replaced within one year or by the next growing season, whichever comes first. Other defective landscape material shall be replaced within three months. 6. All trees shall be straight trunked, full headed and meet all requirements specified. All trees and shrubs must be container grown or balled and burlapped with sizes indicated on the plant schedule on the approved plans. All plants shall be healthy, vigorous material, free of pest and disease. All rootballs, containers and height to width ratios shall conform to the size standards set forth in the American

Standards for Nursery Stock, current edition. 7. All required deciduous trees shall be a minimum of 2" (two inches) in caliper at planting. 8. All required evergreen trees shall be a minimum of 6' (six feet) in height at planting.

CONTRACTOR SHALL SUBMIT AN IRRIGATION PLAN FOR REVIEW.

PLANTING ZONES.

WATER EFFICIENT IRRIGATION PRACTICES SHALL BE UTILIZED INCLUDING

ROTARY HEADS, DRIP, FLOW SENSORS, SMART CONTROLLERS, RAIN SENSORS, ETC

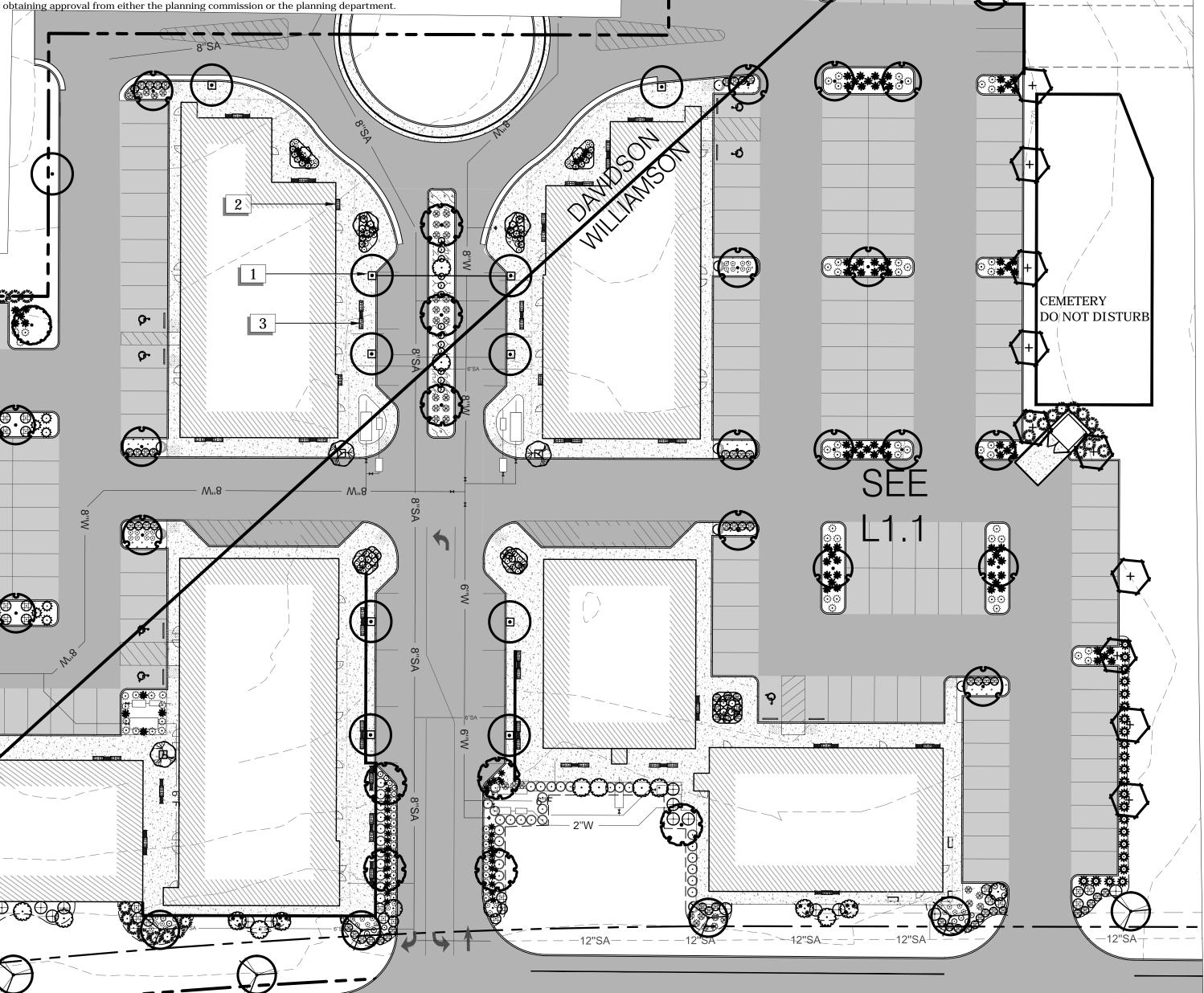
ALL PLANT BEDS, INCLUDING TREE GRATES AND PLANTERS, SHALL BE IRRIGATED

AND SLEEVE LOCATIONS SHALL BE SHOWN. TURF ZONES SHALL BE SEPARATE FROM

9. All required shrubs shall be a minimum of 18" in height at planting. 10. Any site or landscape changes (including but not limited to a change in design, a reduction in size or number of plant material, or the relocation of overhead or underground utilities) will require a revised landscape plan to be submitted and approved prior to the landscape

11. The Owner acknowledges that landscaping in a dedicated easement does not waive or modify the City rights as the easement holder. The Owner understands that the City, its authorized contractor or applicable private utility may at any time and for any reason perform work within the dedicated easement. The City, its authorized contractor or applicable private utility shall have no liability to the Owner for any damage to the landscaping in the easement when said damage is due to work within the easement. The Owner may be held responsible for the removal of the landscaping to enable work to be done. The Owner shall be solely responsible for any costs incurred in repairing and/or replacing the required landscaping. 12. ATTENTION OWNER/ INSTALLER:

This landscape plan has been designed to meet the minimum requirements of the City Zoning ordinance, the approval of the planning commission, and planning department policy. Relocating, substituting, resizing, reducing or deleting material may cause the site to no longer conform to the requirements; Thus problems may arise with releasing the performance/ maintenance bond for landscaping. Deviation from the approved landscape plan shall not be made without first consulting Heibert+Ball, Land Design and then



SITE DATA - NOLENSVILLE - L1.1 SITE AREA: 3.53 ACRES GROSS AREA OF PARKING (GAP): 49,690 SF LANDSCAPE REQUIREMENTS REQUIRED STREET TREES

- 1 CANOPY TREE SHALL BE PLANTED FOR EACH 50 FEET OF STREET FRONTAGE 1 3" CANOPY TREE/ 50 LF OF FRONTAGE/ 455 LF 9 CANOPY TREES

9 3" TREES

10 CANOPY TREES 10 3" CANOPY TREES

UNDERSTORY PROVIDED DUE TO OVERHEAD UTILITES - 1 CANOPY TREE SHALL BE PLANTED FOR EACH 50 FEET OF PARKING AREA PERIMETER

PROPOSED

REQUIRED INTERIOR LANDSCAPING - 8% OF PARKING AREA SHALL BE LANDSCAPED * MIN. LANDSCAPE REQ. 8 % OF GAP 49,690 SF - 1 CANOPY TREE SHALL BE PLANTED FOR EVERY 10 PARKING SPACES 3" CANOPY TREES * 1 3" CANOPY TREE/ 10 PARKING SPACES 136 Parking Spaces 14 CANOPY TREES BUFFER ZONE REQUIREMENTS

LANDSCAPE REQUIREMENTS

EASTERN PARKING PERIMETER

PERIMETER PARKING AREA

EASTERN PARKING PERIMETER

PROPOSED REQUIRED REQUIRED TREE DENSITY 5 TREE DENSITY UNITS PER ACRE 17.65 TDU 29.8 TDU **PROPOSED NEW TREES:** UNITS UNITS 0.5 =

0.6 = 22.8 **CREDIT FOR NEW TREES:** 29.8 CALIPER INCHES TOTAL TREE DENSITY UNITS PROVIDED: 29.8 CALIPER INCHES

CALCULATIONS WORKSHEET FOR TREE DENSITY REQUIREMENTS L1.2 METRO ORD # 094-1104 AREA OF LOT: **BUILDING COVERAGE:** - 0.19 ACRES

1 3" CANOPY TREE/ 50 LF OF FRONTAGE/ 450 LF

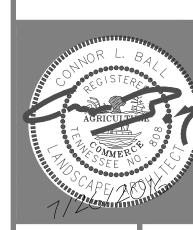
AREA OF REQUIRED COMPLIANCE: 1.46 ACRES x 14.0 REQUIRED TREE DENSITY UNITS: 20.44

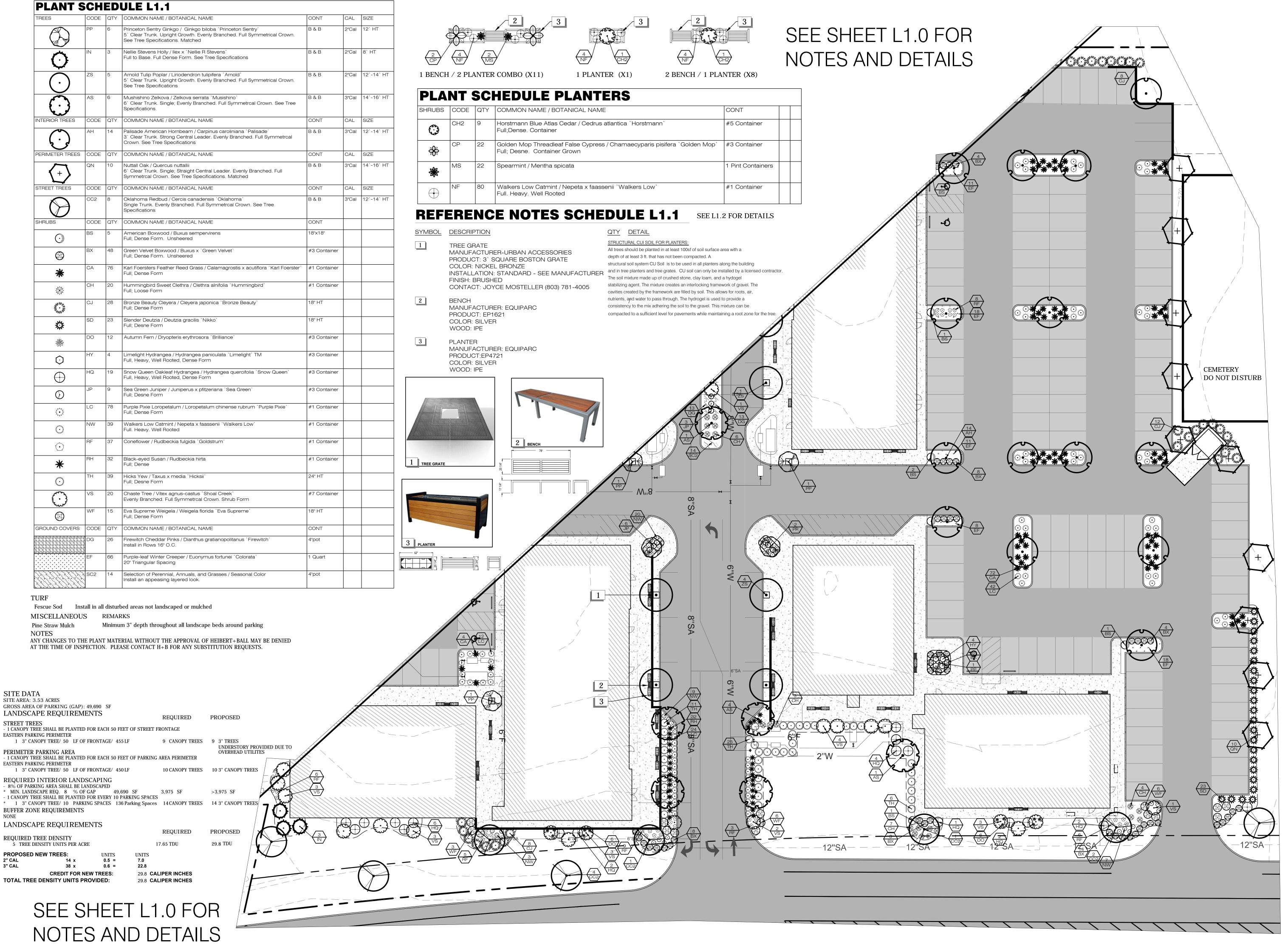
PROPOSED NEW TREES: 2" CAL @ 0.5 $30 \times 0.5 = 15.0$ 3" CAL @ 0.6 $17 \times 0.6 = 10.2$ CREDIT FOR NEW TREES: 25.2

PROVIDED TREE DENSITY UNITS: 25.2 IRRIGATION TO BE PROVIDED BY **AUTOMATIC IRRIGATION SYSTEM** Heibert+Bal LAND DESIGN 1894 Gen. Geo. Patton Dr.

Suite 400 ranklin, TN 37067 Tel: 615.376.2421

www.hblanddesign.com





Heibert+Ball
LAND DESIGN
1894 Gen. Geo. Patton Dr.
Suite 400
Franklin, TN 37067

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PROPOSED SITE FOR:

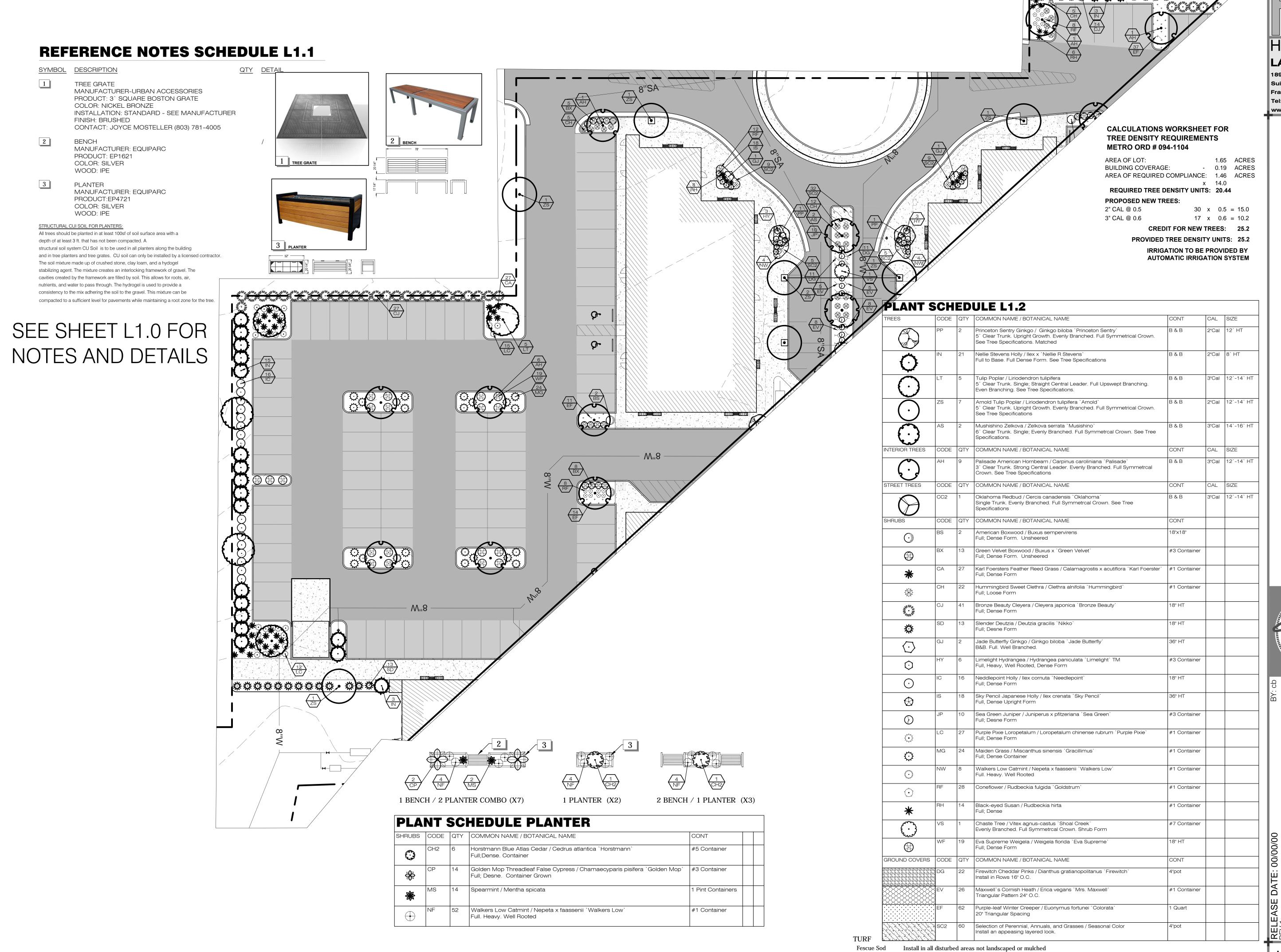
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L1.1



Heibert+Ball **LAND DESIGN** 1894 Gen. Geo. Patton Dr. Suite 400

Franklin, TN 37067 Tel: 615.376.2421 www.hblanddesign.com

Pine Straw Mulch Minimum 3" depth throughout all landscape beds around parking

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AT THE TIME OF INSPECTION. PLEASE CONTACT H+B FOR ANY SUBSTITUTION REQUESTS.